

Talk Agenda

- Introduce .NET Framework Platform
 - Background on CLR, Framework Libraries
- Introduce ASP+
 - Comparison with ASP
- Walkthrough lots of ASP+ Code Examples
 - Build Pages and Services

A New Generation Of Software From Microsoft

1992
Client/Server



Win32

A New Generation Of Software From Microsoft

1996
Internet
1st Gen

IE/IIS



1992
Client/Server

Win32



Third Generation Internet

1st Generation

2nd Generation

3rd Generation

1994-96

1996-2000

2000+

Static pages

Dynamic pages

Rich browsing

E-mail,
basic information

Start of
personalization,
e-commerce

Web Services

IE, IIS

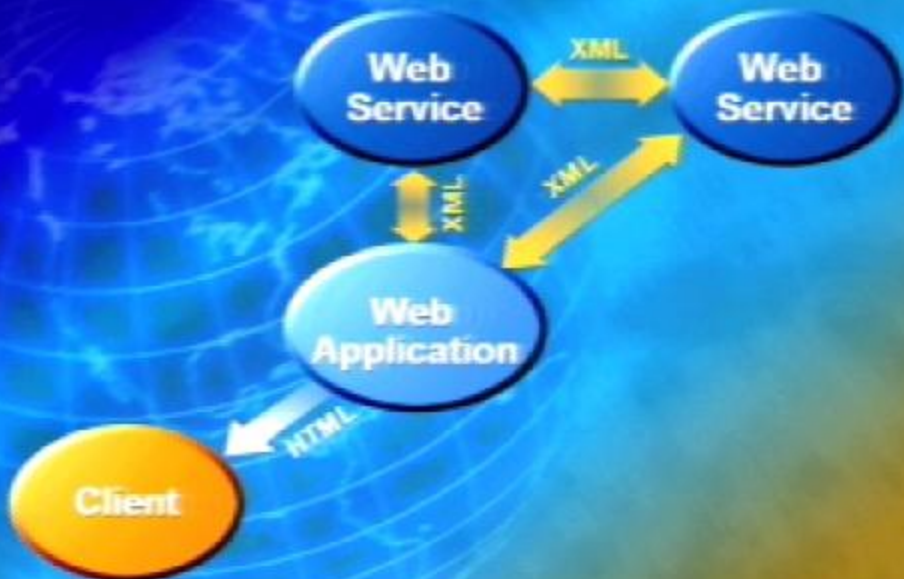
Windows DNA

.NET

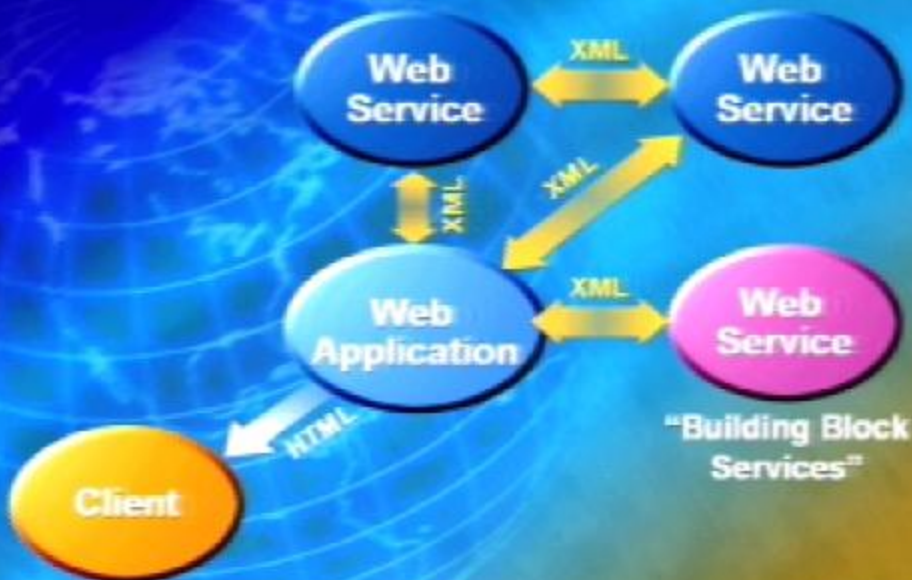
.NET Web Applications



.NET Web Applications



.NET Web Applications



Introducing .NET Platform

VisualStudio.Net

.NET Orchestration

.NET
Framework

.NET
Enterprise
Servers

Building
Block
Services

Windows (CE, 9x, NT4, ME, 2000)

.NET Framework

Web
Applications

Windows
Applications

Data & XML

Base Classes

VisualStudio.Net

Common Language Runtime

Orchestration

.NET
Framework

.NET
Enterprise
Servers

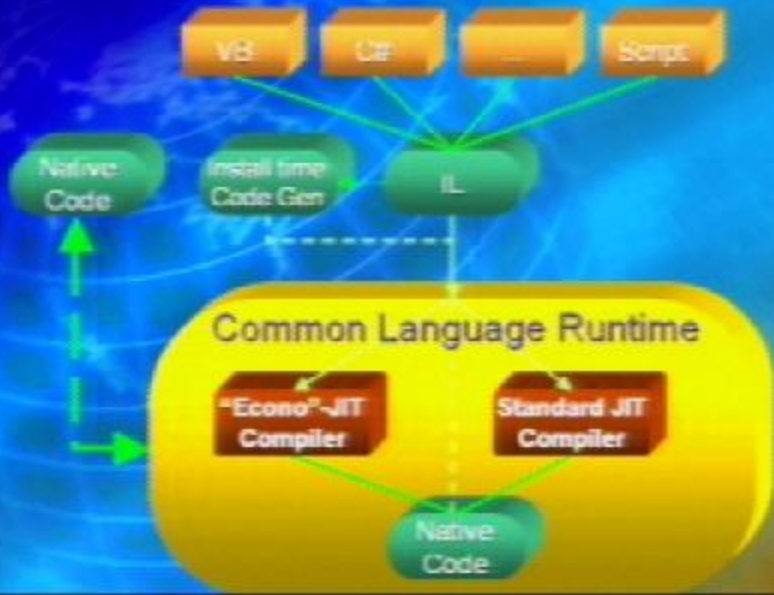
Building
Block
Services

Windows (CE, ME, 2000, and .NET)

Common Language Runtime

- Multi-language runtime environment
 - Over 15 languages supported today
- Language/Hardware/OS Independent
 - Compact Framework for Small Devices
- Unified type and object system
 - Seamless cross language interop
- Industrial strength JIT/Garbage collector
 - Designed for multi-proc servers

CLR Execution Model



Common Language Runtime

- Eliminates the Crud of COM:
 - GUIDs, CLSIDs, ProgIDs, HRESULTS
 - CoCreateInstance, IUnknown, BSTRs
 - QueryInterface, AddRef, Release
 - Type Libraries, IDL, COM Threading Models
 - All these are history....
- Enables Clean OO programming
 - Classes and Interfaces
 - Constructors, Properties, Methods, Events
 - Cross language inheritance

.NET Framework Libraries

- Single *consistent* set of object oriented class libraries to enable building distributed web applications
- Built using classes arranged across logical hierarchical namespaces
 - For example: `System.Data.SQL`
- Work with all CLR languages
 - No more "VBRun" or "MFC" divide

NET Framework Namespaces

- System
- System.Collections
- System.Data
- System.Drawing
- System.Diagnostics
- System.DirectoryServices
- System.Globalization
- System.IO
- System.Messaging
- System.Net
- System.Threading
- System.Text
- System.Reflection
- System.Security
- System.WinForms
- System.Web
- System.XML

NET Framework Namespaces

- System
- System.Collections
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- System.Drawing
- System.Diagnostics
- System.DirectoryServices
- System.Globalization
- System.IO
- System.Messaging
- System.Net
- System.Threading
- System.Text
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- System.Security
- System.WinForms
- System.Web
- System.XML

NET Framework Namespaces

- System
- System.Collections
- System.Data
- System.Drawing
- System.Diagnostics
- System.DirectoryServices
- System.Globalization
- System.IO
- System.Messaging
- System.Net
- System.Threading
- System.Text
- System.Reflection
- System.Security
- System.Windows.Forms
- System.Web
- System.XML

.NET Framework Namespaces

- System
- System.Collections
- System.Data
- System.Drawing
- System.Diagnostics
- System.DirectoryServices
- System.Globalization
- System.IO
- System.Messaging
- System.Net
- System.Threading
- System.Text
- System.Reflection
- System.Security
- System.WinForms
- System.Web
- System.XML

ASP Today (the Pros)

- The leading web app development platform
 - Nearly 1 million developers using ASP today
- Simple and approachable model for web developers to get started
 - No compilers required – “just hit save”
 - Easy to use languages and object model
- Well established developer support base
 - Good book/consulting/conference support

ASP Today (the Cons)

- Way too much code required
 - Simple tasks often not easy
 - Poor re-use/encapsulation model
- Applications contain spaghetti code
 - Intermixed html/code
 - Messy include files for re-use
 - Hacky page activation techniques
- Limited language support
 - Latebound scripting only

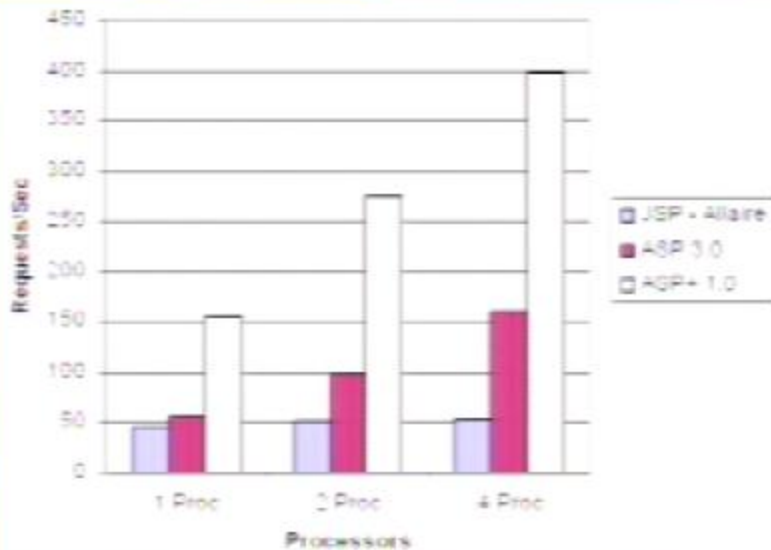
ASP Today (the Cons)

- **Weak tools**
 - Poor layout, debuggers, profilers, etc
- **Confusing security architecture**
 - Doesn't work well for Internet apps
- **Poor deployment**
 - COM components a nightmare
 - Metabase configuration options confusing
- **Scalability challenges**
 - No web farm or caching infrastructure

Introducing ASP+

- ASP+ is a new programming framework designed to make web apps easier to:
 - Build, Deploy, Run
- Radical advancement of today's ASP
 - Broader programming language support
 - Easier page programming model
 - Richer XML features and integration
 - XCopy/FTP deployment
 - Better reliability and recovery
 - Fantastic Visual Studio designer support

MSN Home Page Performance



ASP+ Platform

**Web
Pages**

**Web
Services**

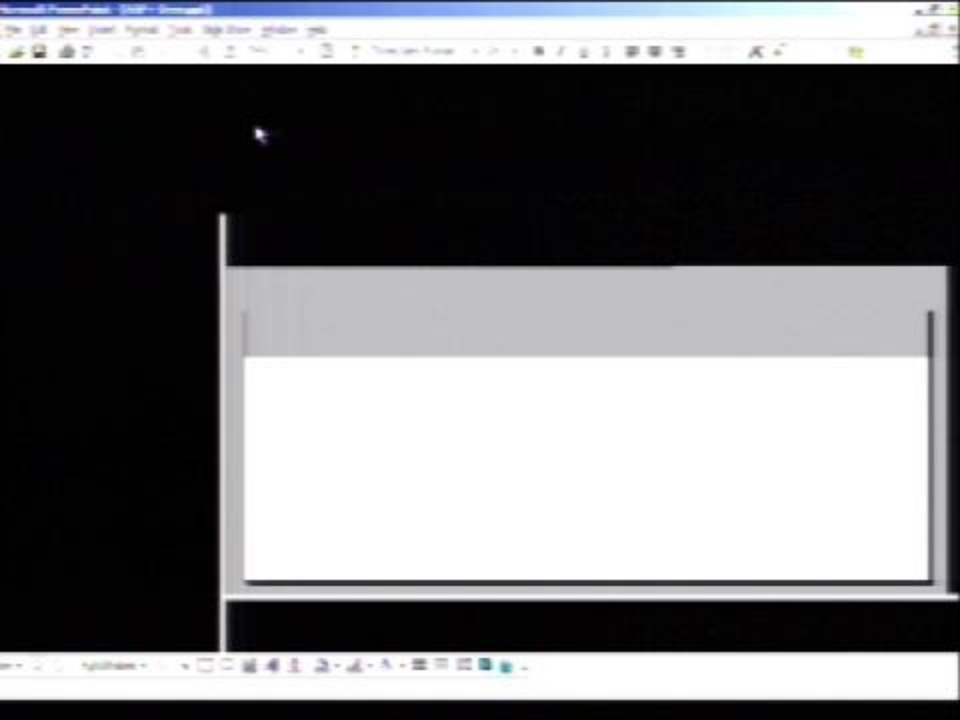
**Web Application
Infrastructure**

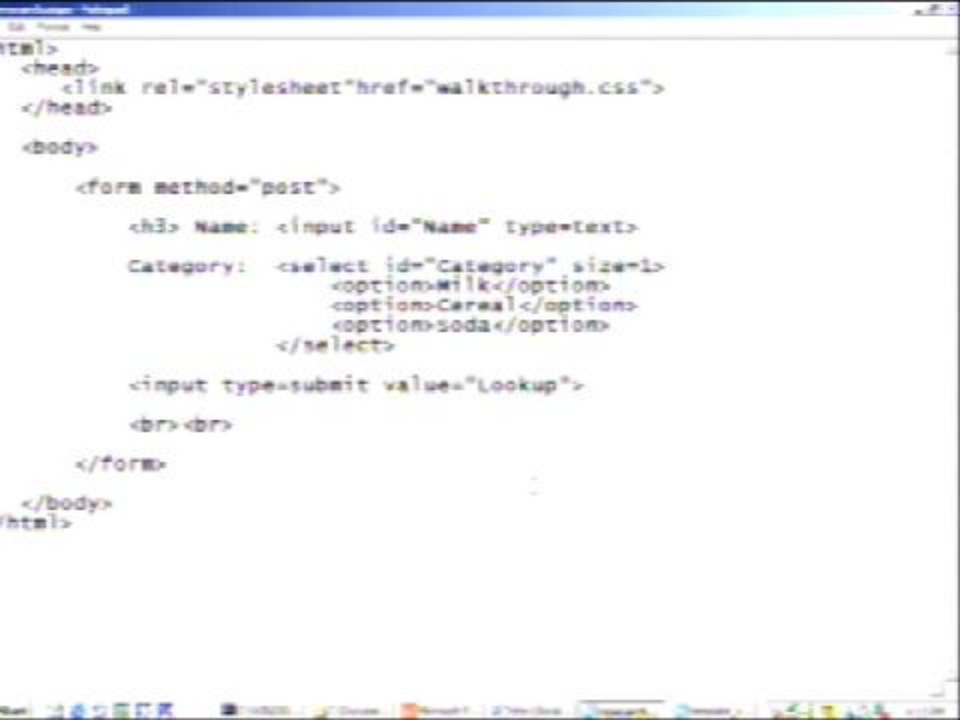
ASP+ Web Pages (1 of 2)

- **Goal: Make it dramatically easier to build dynamic web pages**
- **Simplify common tasks done today**
 - Validation, Data Manipulation,PostBack, State
- **Enable better support for different clients**
 - Enable better uplevel/downlevel scenarios
 - Enable rich support for small devices
- **Enable cleaner code organization**
 - Code no longer has to be mixed with HTML
 - Developers/designers can work independently

ASP+ Web Pages (2 of 2)

- **Declarative server-side UI control model**
 - Great way to encapsulate functionality
 - Zero coding required for common scenarios
- **“VB for the Web” – but Richness of HTML UI**
 - Hierarchy, Repetition, Template UI
- **Rich extensibility model for ISVs to innovate**





```
<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>
<body>
  <form method="post">
    <h3> Name: <input id="Name" type="text">
    Category: <select id="Category" size="1">
      <option>Milk</option>
      <option>Cereal</option>
      <option>Soda</option>
    </select>
    <input type="submit" value="Lookup">
    <br><br>
  </form>
</body>
</html>
```



Name: Category:

Welcome to ASP-

Welcome to ASP-

Welcome to ASP-

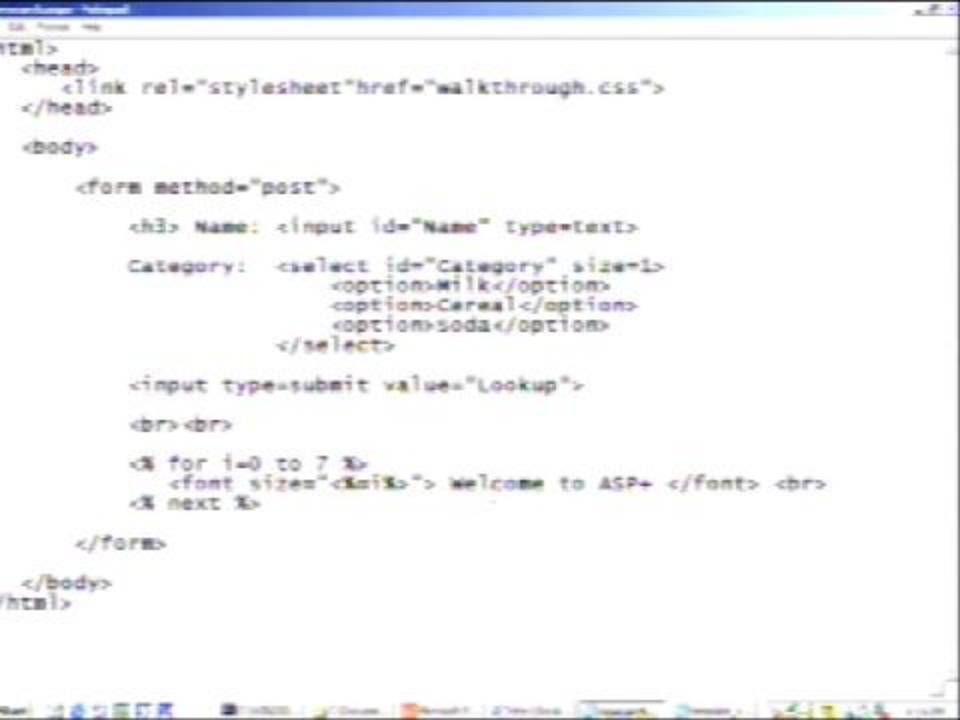
Welcome to ASP-

Welcome to ASP+

Welcome to ASP+

Welcome to ASP+

Welcome to ASP+



```
<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>
<body>
  <form method="post">
    <h3> Name: <input id="Name" type="text">
    Category: <select id="Category" size="1">
      <option>Milk</option>
      <option>Cereal</option>
      <option>Soda</option>
    </select>
    <input type="submit" value="Lookup">
    <br><br>
    <% for i=0 to 7 %>
      <font size="<%=i%>"> Welcome to ASP+ </font> <br>
    <% next %>
  </form>
</body>
</html>
```

```
html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>

<body>

  <form method="post">

    <h3> Name: <input id="Name" type="text">

    Category: <select id="Category" size=1>
      <option>Milk</option>
      <option>Cereal</option>
      <option>soda</option>
    </select>

    <input type="submit" value="Lookup">

    <br><br>

    <%
      for i=0 to 7 %>
        <font size="<%=i%>"> welcome to ASP+ </font> <br>
      <% next %>

    </form>

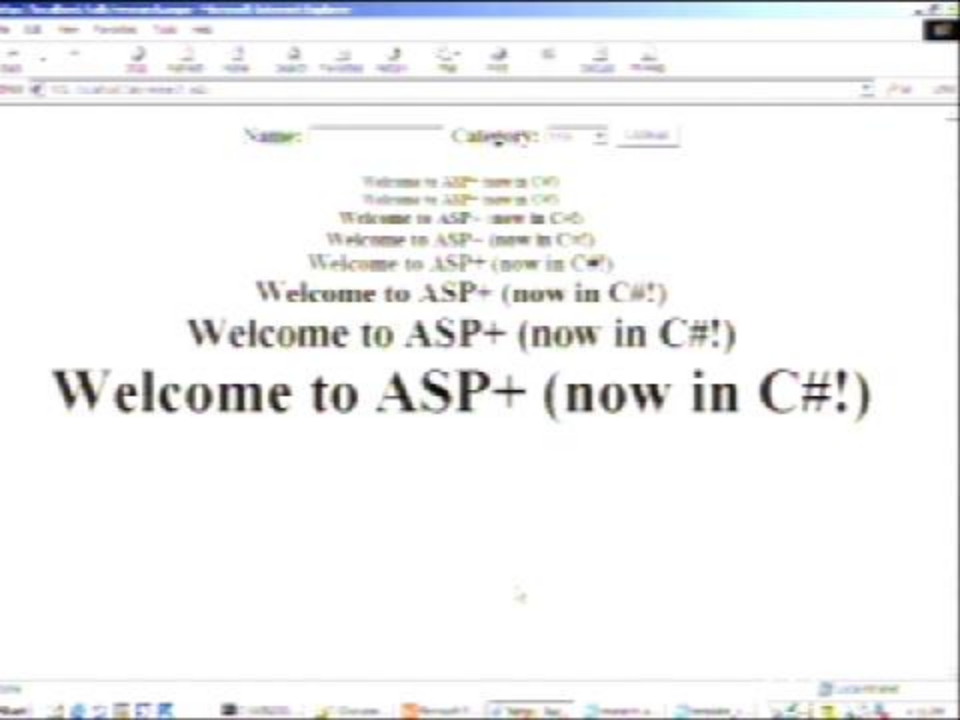
  </body>
</html>
```

```

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>
    <form method="post">
        <h3> Name: <input id="Name" type="text">
        Category: <select id="Category" size="1">
            <option>Milk</option>
            <option>Cereal</option>
            <option>Soda</option>
        </select>
        <input type="submit" value="Lookup">
        <br><br>
        <% dim i as integer
            for i=0 to 7 %>
                <font size="<%=i%>"> Welcome to ASP+ </font> <br>
            <% next %>
        </form>
    </body>
</html>

```



Name: Category:

Welcome to ASP+ (now in C#)

Welcome to ASP+ (now in C#)

Welcome to ASP+ (now in C#)

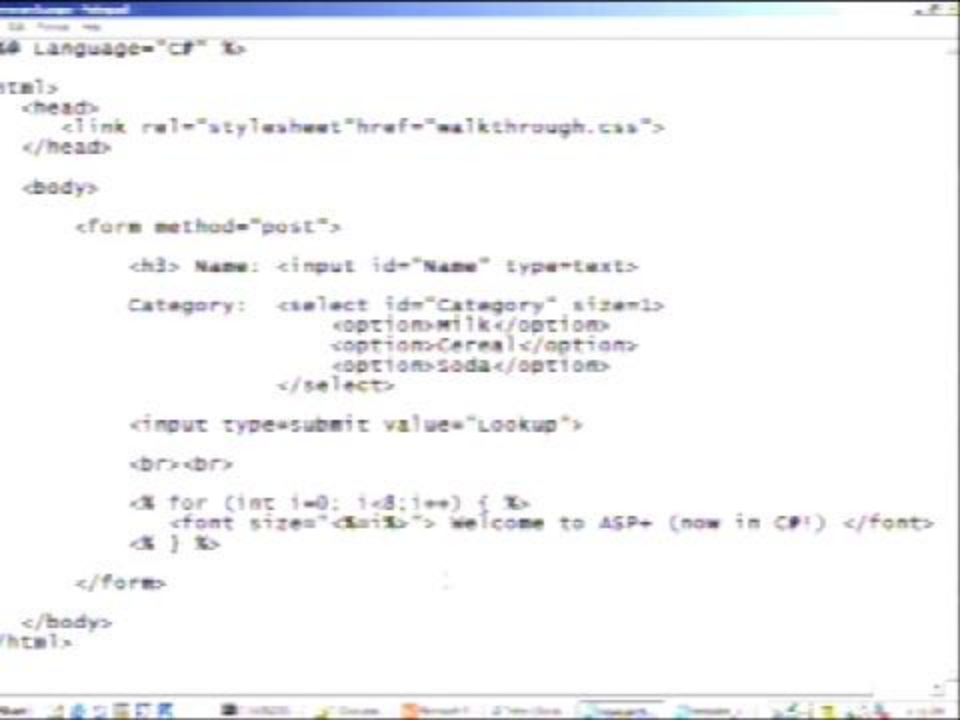
Welcome to ASP+ (now in C#)

Welcome to ASP+ (now in C#)

Welcome to ASP+ (now in C#!)

Welcome to ASP+ (now in C#!)

Welcome to ASP+ (now in C#!)



ASP+ Error

Compilation Error

Description: An error occurred during the compilation of a resource required to service this request. Please review the specific error details below and modify your source code appropriately.

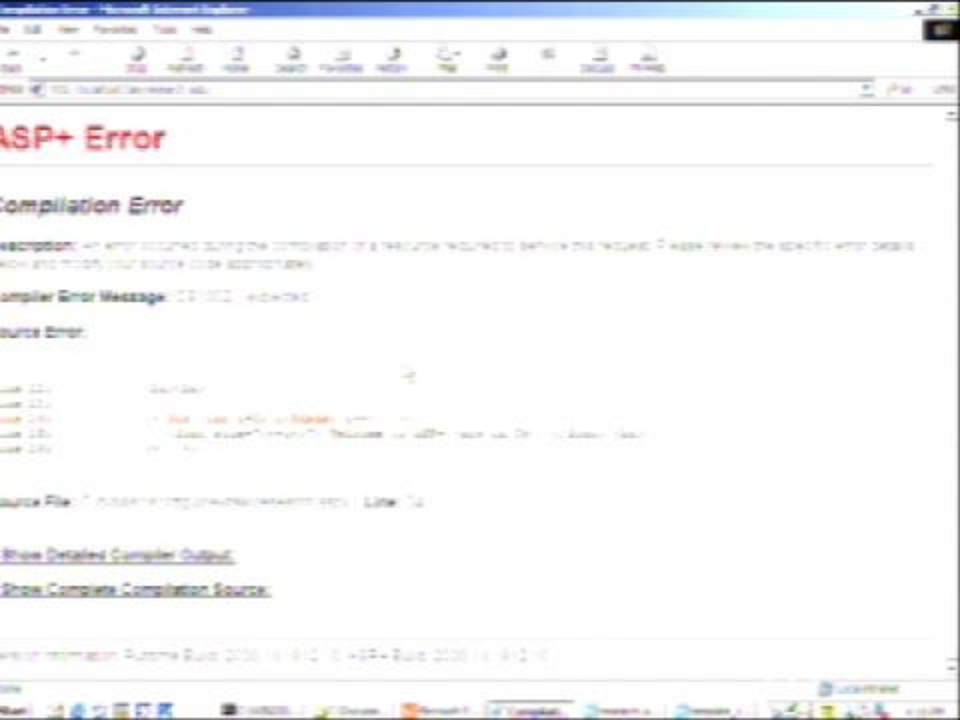
Compiler Error Message: CS1002: ; expected

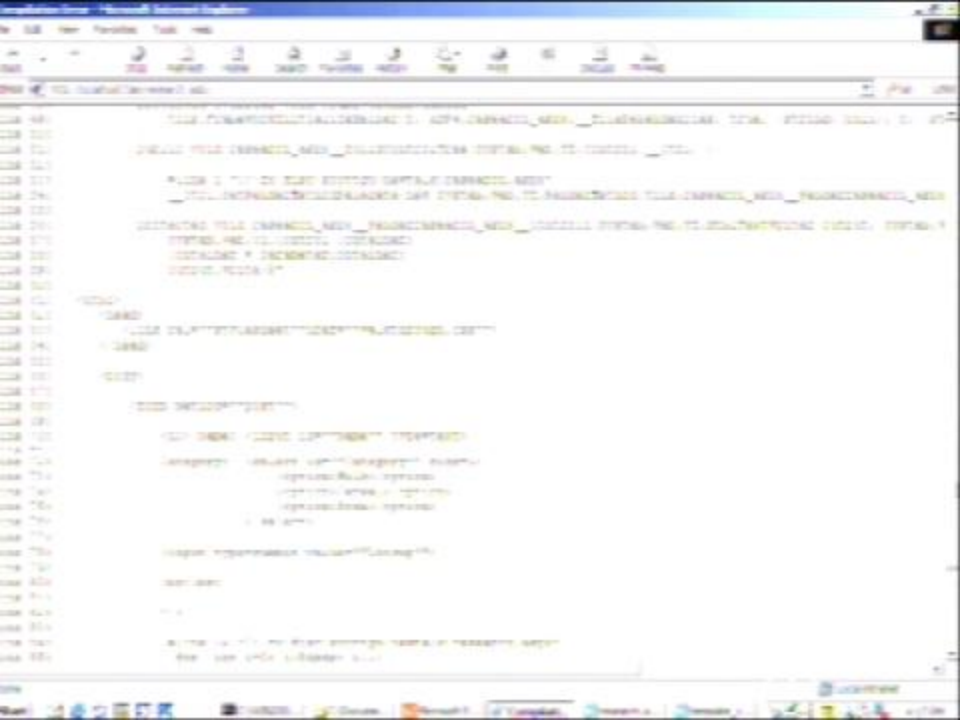
Source Error:

```
Line 1:      <!-->
Line 2:
Line 3:
Line 4:      <%@ Page Language="VB" %>
Line 5:      <!-- Page Title --> Welcome to ASP+ Now in VB! <!-->
Line 6:      <% -->
```

Source File: C:\In\Misc\scottgunewtalkresearch.aspx Line: 24

[Show Detailed Compiler Output:](#)






```

<!-- Language="cf" %>

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>

<form method="post">

<h3> Name: <input id="Name" type="text">

Category: <select id="Category" size=1>
<option>Milk</option>
<option>Cereal</option>
<option>Soda</option>
</select>

<input type="submit" value="Lookup">

<br><br>

<% for (int i=0; i<8; i++) { %>
<font size="<%=i%>"> Welcome to ASP+ (now in CF!) </font>
<% } %>

</form>

</body>

```

```

@ Language="cf" %>

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>

<form method="post">

    <h3> Name: <input id="Name" type="text">

    Category: <select id="Category" size=1>
        <option>Milk</option>
        <option>Cereal</option>
        <option>Soda</option>
    </select>

    <input type="submit" value="Lookup">

    <br><br>

    <% Trace.Write("You'll love this!",

    <% for (int i=0; i<8; i++) { %>
        <font size="<%=i%>"> Welcome to ASP+ (now in CF!) </font>
    <% } %>

</form>

</body>

```

```
<% Language="C#" Trace="true" %>
```

```
<html>  
<head>  
  <link rel="stylesheet" href="walkthrough.css">  
</head>
```

```
<body>
```

```
  <form method="post">
```

```
    <h3> Name: <input id="Name" type="text">
```

```
    Category: <select id="Category" size=1>  
      <option>Milk</option>  
      <option>Cereal</option>  
      <option>Soda</option>  
    </select>
```

```
    <input type="submit" value="Lookup">
```

```
    <br><br>
```

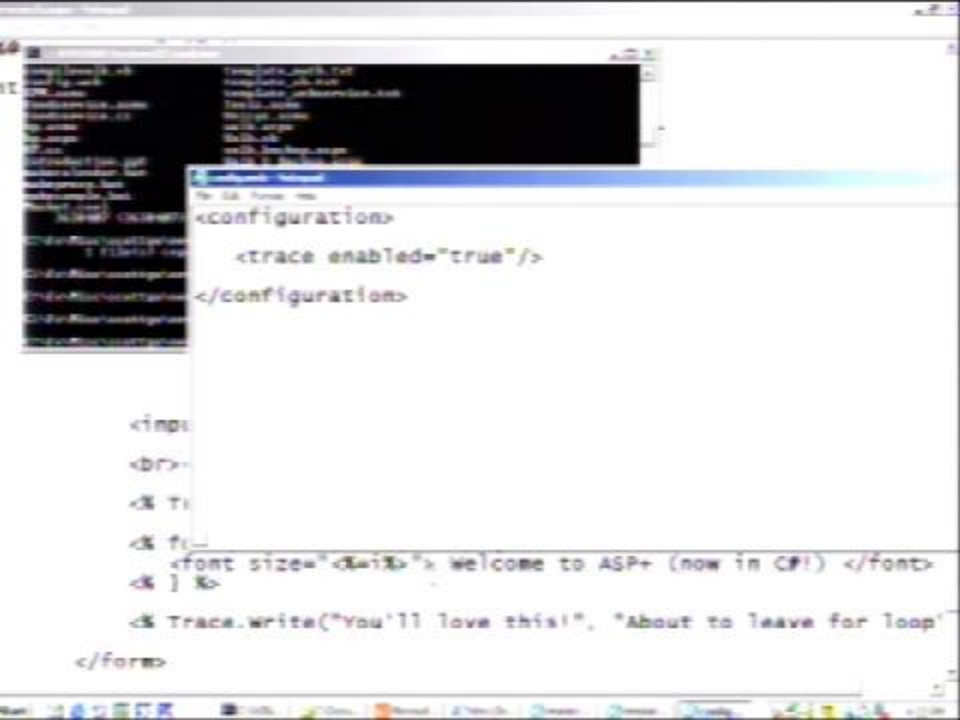
```
    <% Trace.Write("You'll love this!", "About to start for loop")
```

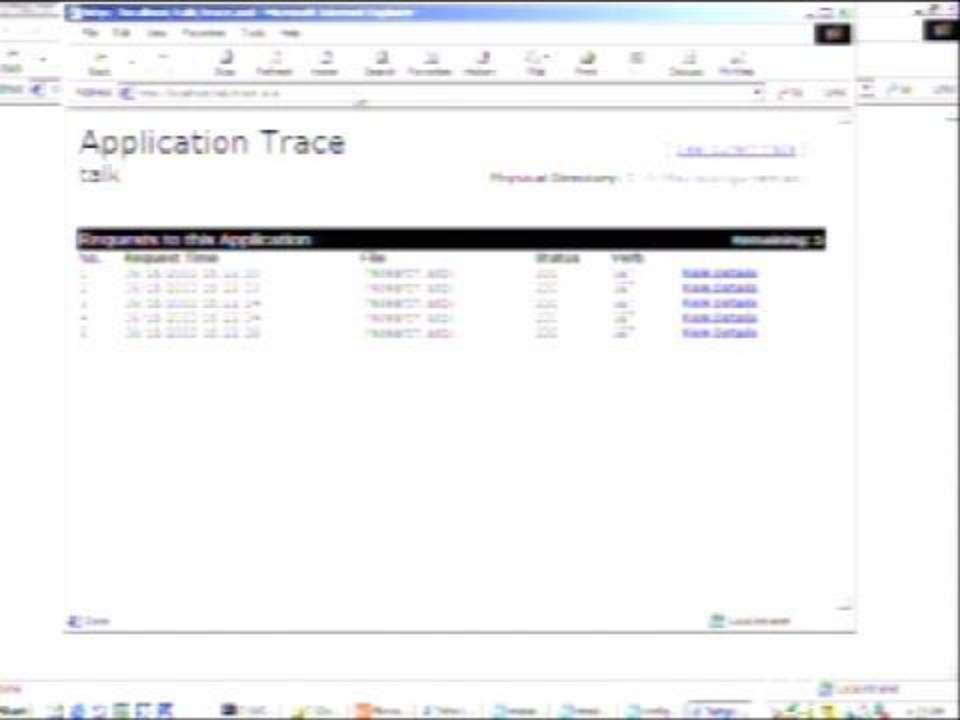
```
    <% for (int i=0; i<8; i++) { %>  
      <font size="<%=i%>"> Welcome to ASP+ (now in C#!) </font>  
    <% } %>
```

```
    <% Trace.Write("You'll love this!", "About to leave for loop")
```

```
</form>
```


[illegible]





Application Trace

task

[View Details](#)

Physical Directory: C:\...How many requests are...

Requests to this Application

Remaining: 3

Id	Request Time	File	Status	Verb	View Details
1	2010-10-10 10:10:10	70101010_001	200	GET	View Details
2	2010-10-10 10:10:10	70101010_002	200	GET	View Details
3	2010-10-10 10:10:10	70101010_003	200	GET	View Details
4	2010-10-10 10:10:10	70101010_004	200	GET	View Details
5	2010-10-10 10:10:10	70101010_005	200	GET	View Details
6	2010-10-10 10:10:10	70101010_006	200	GET	View Details

Request Details

Request Details

Session ID:	47234567890123456789	Request Type:	GET
Time of Request:	08/08/2008 08:00:00	Status Code:	200
Completed:		Called:	

Trace Information

Category	Message	From First(x)	From Last(x)
HTTP Page	begin url	0.000000	0.000000
HTTP Page	end url	0.000000	0.000000
HTTP Page	begin response	0.000000	0.000000
HTTP Page	end response	0.000000	0.000000
HTTP Page	begin header	0.000000	0.000000
HTTP Page	end header	0.000000	0.000000
HTTP Page	begin body	0.000000	0.000000
HTTP Page	end body	0.000000	0.000000
HTTP Page	begin footer	0.000000	0.000000
HTTP Page	end footer	0.000000	0.000000
HTTP Page	begin page	0.000000	0.000000
HTTP Page	end page	0.000000	0.000000

Control Time

Control ID	Type	Render Size bytes (excluding children)	Serialize Size bytes (excluding children)
Page	HTTP REQUEST_PAGE	1000	1

Cookies Collection

Name	Value

Done


```

@ Language="cf" %>

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>
<form method="post">
    <h3> Name: <input id="Name" type="text">
    Category: <select id="Category" size=1>
        <option>Milk</option>
        <option>Cereal</option>
        <option>Soda</option>
    </select>
    <input type="submit" value="Lookup">
    <br><br>
    <% Trace.Write("You'll love this!", "About to start for loop")
    <% for (int i=0; i<8; i++) { %>
        <font size="<%=i%>"> Welcome to ASP+ (now in CF!) </font>
    <% } %>
    <% Trace.Write("You'll love this!", "About to leave for loop")
</form>

```

```
<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>

<body>
```

```
  <form method="get">
```

```
    <h3>
```

```
    <div>
```

```
      <% for i=0 to 7 %>
```

```
        <font size="<% i %>"> Welcome to ASP+ </font>
```

```
      <% next i %>
```

```
    <div>
```

```
    <input type="text">
```

```
    <br>
```

```
  </form>
```

```
</body>
</html>
```

```
  <form method="get">
```

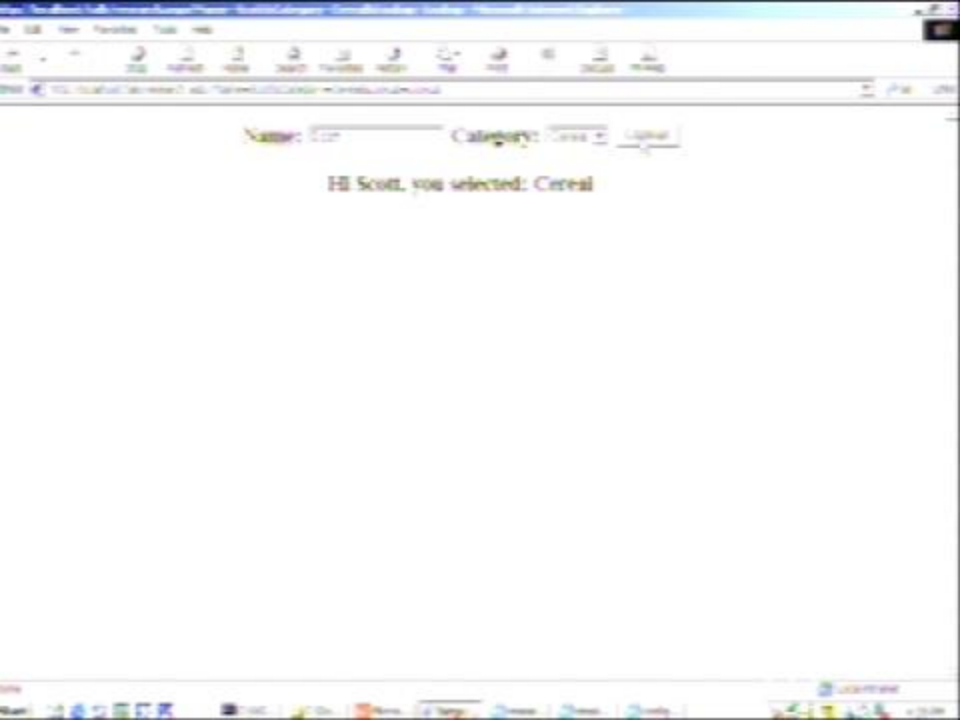
```

html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>
<body>
  <form method="get">
    <h3> Name: <input name="Name" value="<% Request.QueryString('
    <%
      Dim I as Integer
      Dim categories(3) as string

      categories(0) = "Milk"
      categories(1) = "Cereal"
      categories(2) = "Soda"
    %>
    category: <select name="category" size=1>
      <%
        For i=0 to Categories.Length -1
          if (Request.QueryString("Category") = Categr
        %>
          <option selected>
        <%
          else
        %>

```

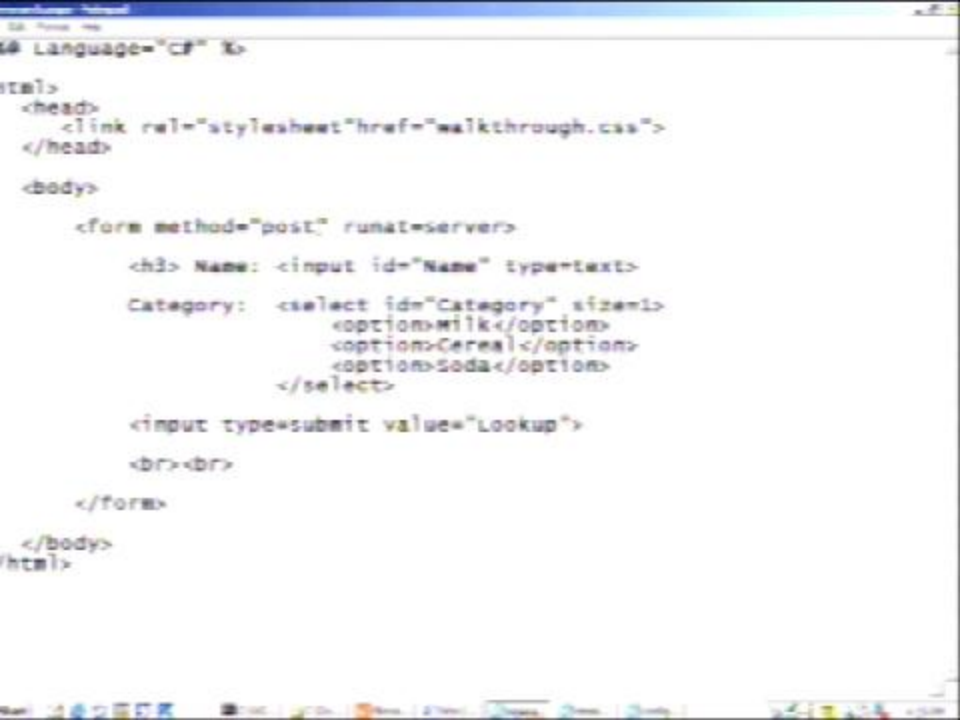
```
VB Form1 - Web
<%
    For i=0 to Categories.Length -1
        if (Request.QueryString("Category") = Category)
%>
            <option selected>
<%
        else
%>
            <option>
<%
        end if
%>
        <%=Categories(i)
%>
    <% NEXT %>
</select>
<input type="submit" name="Lookup" value="Lookup">
<br><br>
<% If (Not Request.QueryString("Lookup") = Null) %>
    Hi <%=Request.QueryString("Name") %>, you selected: <%=Request.QueryString("Category") %>
<% end If %>
</form>
```

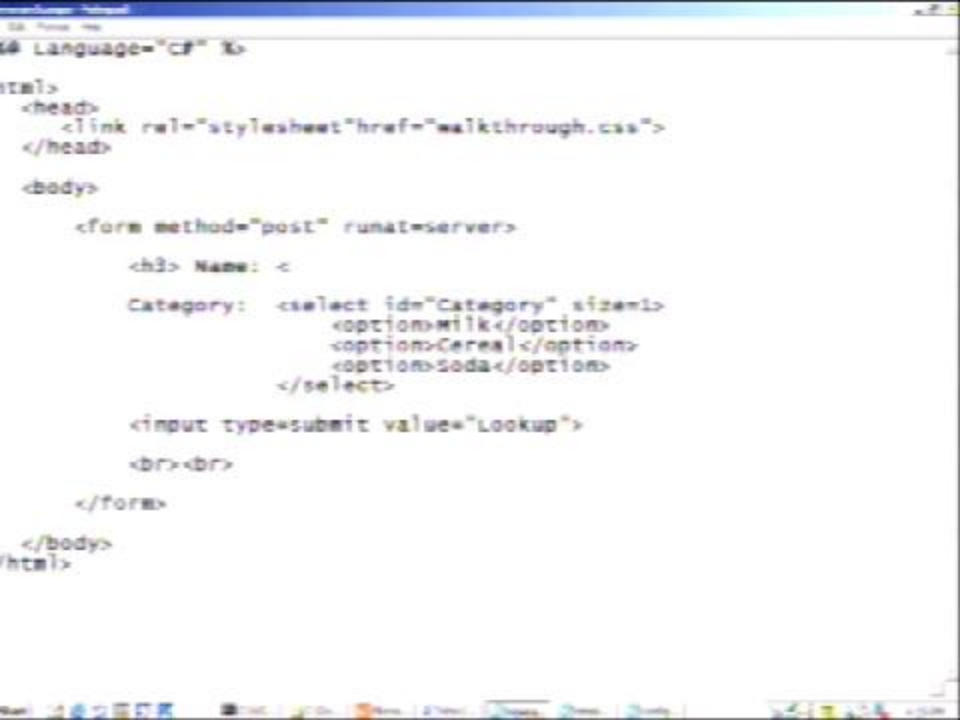


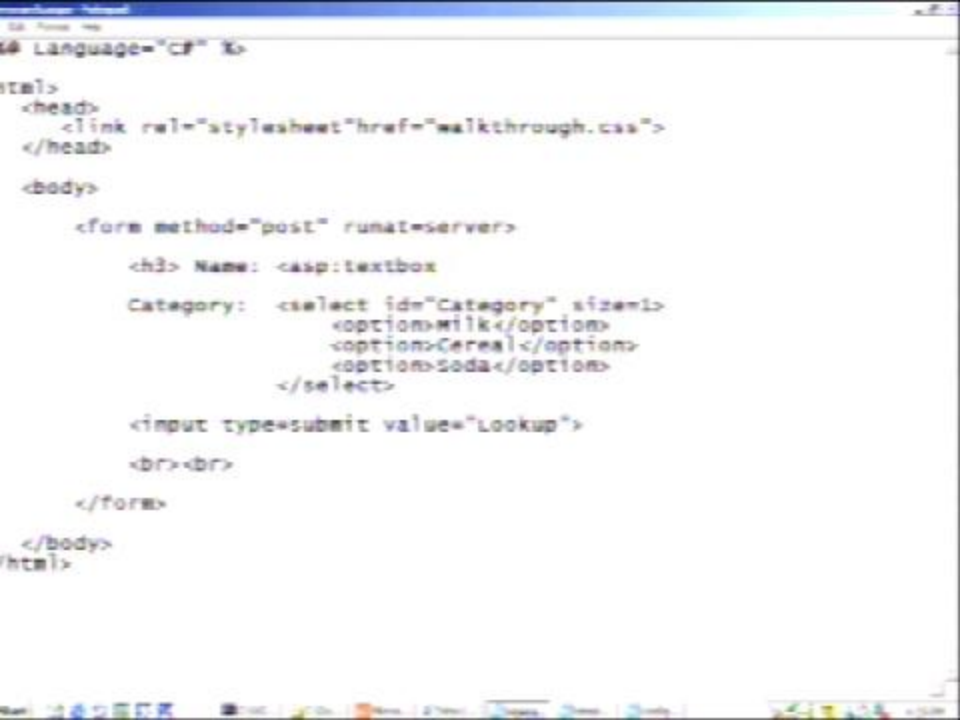


Language="cf" %>

```
<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>
<body>
  <form method="post">
    <h3> Name: <input id="Name" type="text">
    Category: <select id="Category" size=1>
      <option>Milk</option>
      <option>Cereal</option>
      <option>Soda</option>
    </select>
    <input type="submit" value="Lookup">
    <br><br>
  </form>
</body>
</html>
```







Language="cf" %>

```
<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>
<body>
  <form method="post" runat="server">
    <h3> Name: <asp:textbox
    Category: <select id="Category" size="1">
      <option>Milk</option>
      <option>Cereal</option>
      <option>Soda</option>
    </select>
    <input type="submit" value="Lookup">
    <br><br>
  </form>
</body>
</html>
```

```
asp:textbox id="Name" runat=server/>
```

```
<asp:dropdownlist id="Category" runat=server>  
  <asp:listitem value=1>Milk</asp:listitem>  
  <asp:listitem value=2>Cereal</asp:listitem>  
  <asp:listitem value=3>Soda</asp:listitem>  
</asp:dropdownlist>
```

```
asp:button text="Lookup" runat=server/>
```

```
<asp:adrotator AdvertisementFile="ads.xml" runat=server/>
```

```
<script language="vb" runat=server>
```

```
Sub Page_Load(Sender as Object, E as EventArgs)
```

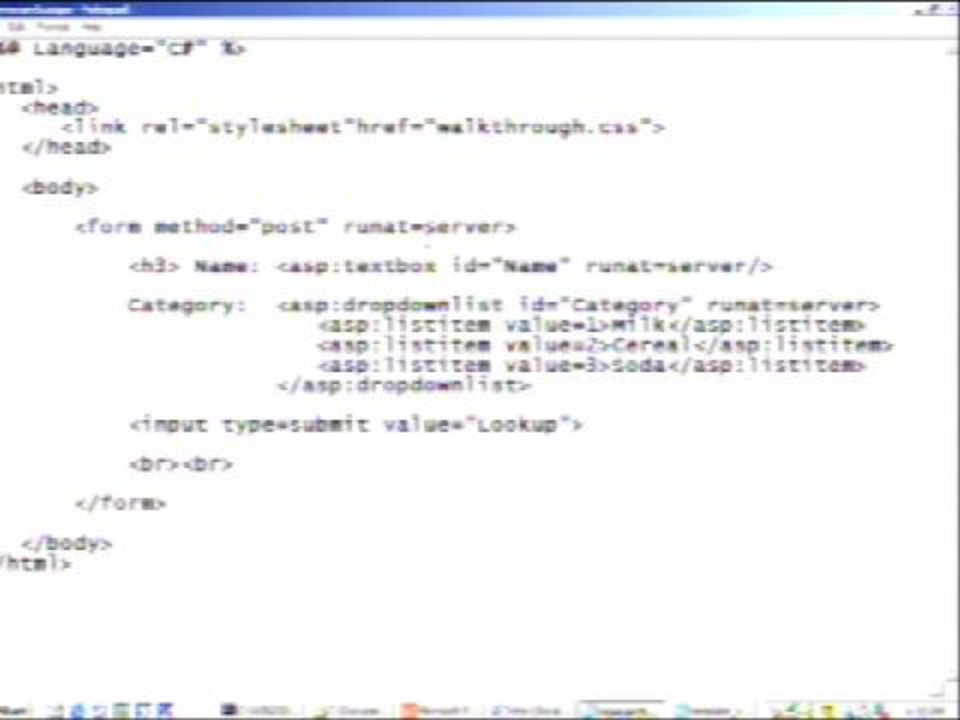
```
End Sub
```

```
</script>
```

```
<script language="vb" runat=server>
```

```
Sub SubmitBtn_Click(Sender as Object, E as EventArgs)
```

```
End Sub
```



```
<% Language="C#" %>
```

```
<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>
```

```
<body>

  <form method="post" runat="server">

    <h3> Name: <asp:textbox id="Name" runat="server"/>

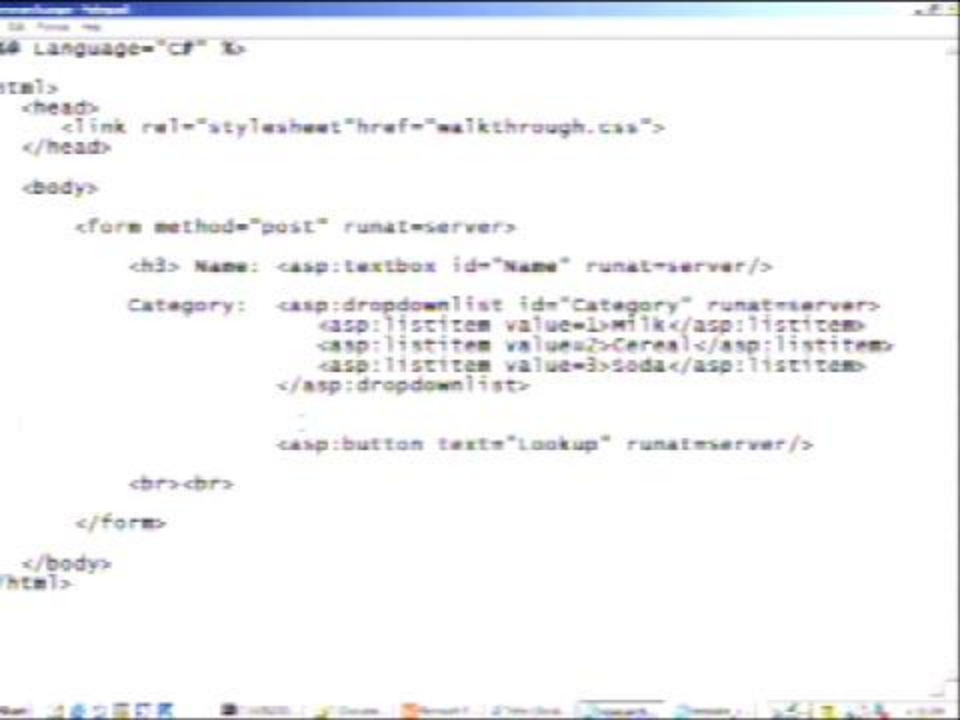
    Category: <asp:dropdownlist id="Category" runat="server">
      <asp:listitem value=1>Milk</asp:listitem>
      <asp:listitem value=2>Cereal</asp:listitem>
      <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>

    <input type="submit" value="Lookup">

    <br><br>

  </form>

</body>
</html>
```



```
@ Language="C#" %>
```

```
<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>
```

```
<body>
```

```
  <form method="post" runat="server">
```

```
    <h3> Name: <asp:textbox id="Name" runat="server"/>
```

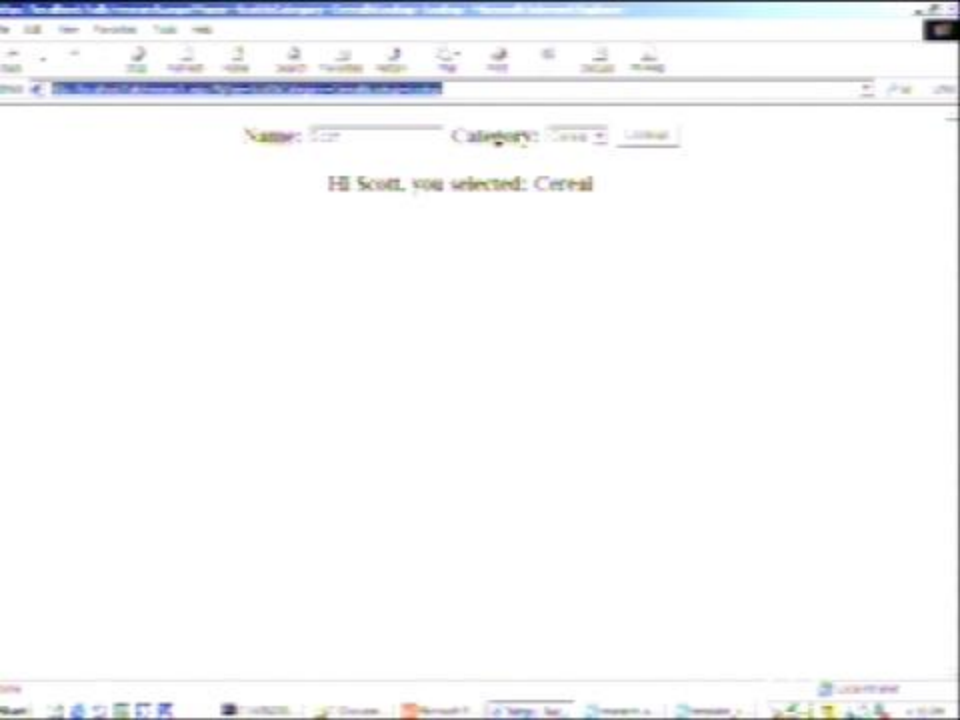
```
    Category: <asp:dropdownlist id="Category" runat="server">
      <asp:listitem value=1>Milk</asp:listitem>
      <asp:listitem value=2>Cereal</asp:listitem>
      <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>
```

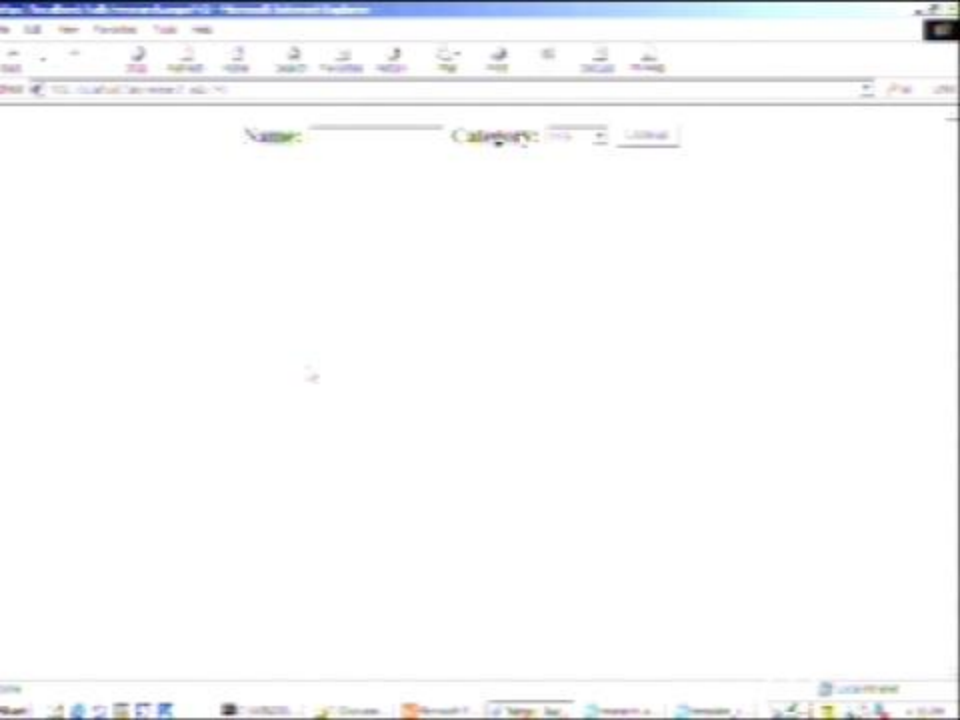
```
    <asp:button text="Lookup" runat="server"/>
```

```
  <br><br>
```

```
</form>
```

```
</body>
</html>
```





```

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>

<FORM name="ctrl1" method="post" action="research.aspx?43" id="ctrl1">
<input type="hidden" name="__VIEWSTATE" value="s0z-1270823580__x">

<h3> Name: <input name="Name" type="text" id="Name">

Category: <select name="category" id="category">
<option value="1">Milk</option>
<option value="2">Cereal</option>
<option value="3">Soda</option>
</select>

<input type="submit" name="ctrl5" value="Lookup">

<br><br>
</FORM>
</body>
</html>

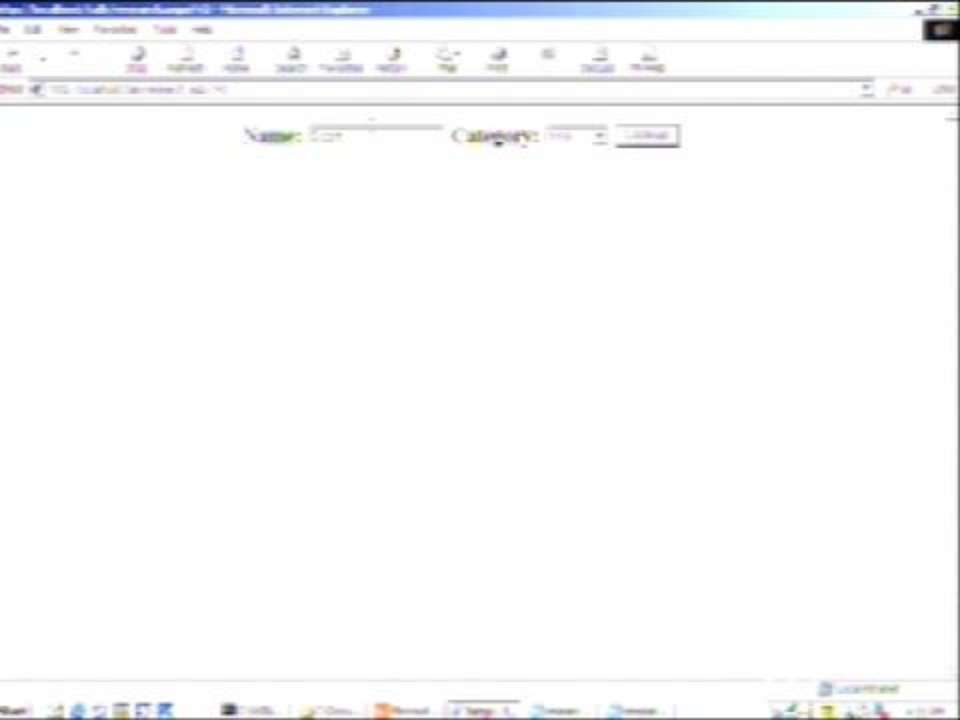
```

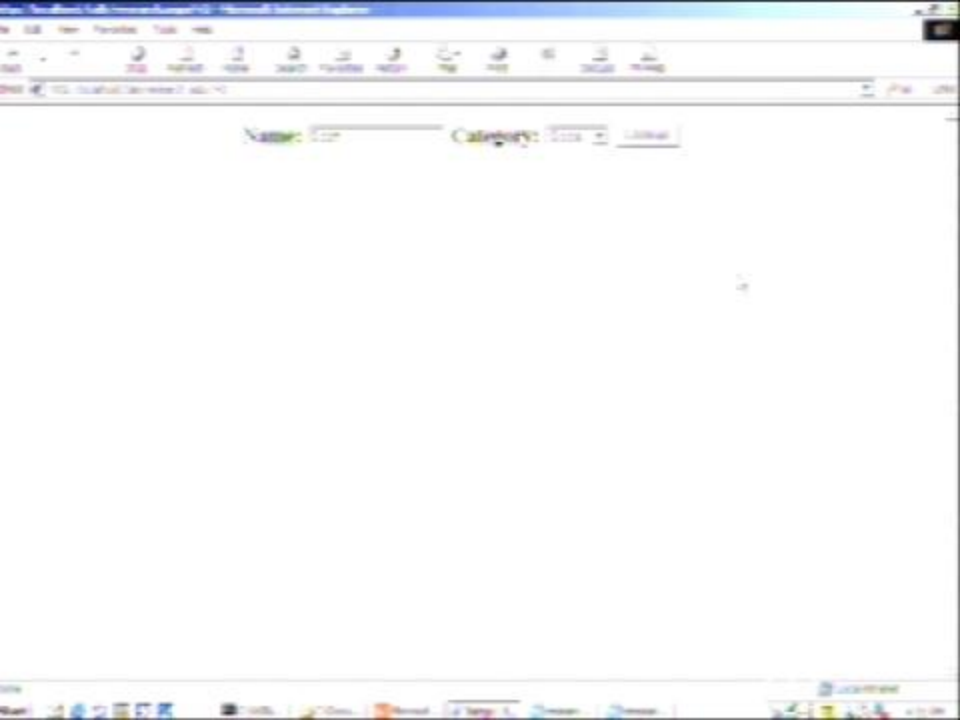
```
html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>
<FORM name="ctrl1" method="post" action="research.aspx?43" id="c1
INPUT type="hidden" name="__VIEWSTATE" value="s0z-1270823580__x">

<h3> Name: <input name="Name" type="text" id="Name">

Category: <select name="category" id="category">
<option value="1">Milk</option>
<option value="2">Cereal</option>
<option value="3">Soda</option>
</select>
<input type="submit" name="ctrl5" value="Lookup">

<br><br>
</FORM>
</body>
/html>
```



```
html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>

<body>

  <form name="ctrl1" method="post" action="research.aspx?43" id="ctrl1">
    <input type="hidden" name="__VIEWSTATE" value="a0z-1270823580__x">

    <h3> Name: <input name="Name" type="text" value="Scott" id="Name">

    Category: <select name="category" id="category">
      <option value="1">Milk</option>
      <option value="2">Cereal</option>
      <option selected value="3">Soda</option>
    </select>

    <input type="submit" name="ctrl5" value="Lookup">

    <br><br>

  </form>

</body>
/html>
```

```

@ Language="cf" %>

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>

<form method="post" runat="server">

    <h3> Name: <asp:textbox id="Name" runat="server"/>

    Category: <asp:dropdownlist id="Category" runat="server">
        <asp:listitem value=1>Milk</asp:listitem>
        <asp:listitem value=2>Cereal</asp:listitem>
        <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>

    <asp:button text="Lookup" runat="server"/>

    <br><br>

    <asp:label id="Message" runat="server"/>

</form>

</body>
</html>

```

```

@ Language="cf" %>

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>

<script language="vb" runat=server>
    Sub Page_Load(Sender as Object, E as EventArgs)
    End Sub
</script>

<body>

<form method="post" runat=server>

    <h3> Name: <asp:textbox id="Name" runat=server/>

    Category: <asp:dropdownlist id="Category" runat=server>
        <asp:listitem value=1>Milk</asp:listitem>
        <asp:listitem value=2>Cereal</asp:listitem>
        <asp:listitem value=3>soda</asp:listitem>
    </asp:dropdownlist>

    <asp:button text="Lookup" runat=server/>

    <br><br>

```

```
rel="stylesheet" href="walkthrough.css">
```

```
language="VB" runat="server">
```

```
Page_Load(Sender as Object, E as EventArgs)
```

```
Message.Text = "Hi " & Name.Text & " you selected: " & Category.SelectedItem
```

```
Method="post" runat="server">
```

```
3> Name: <asp:textbox id="Name" runat="server"/>
```

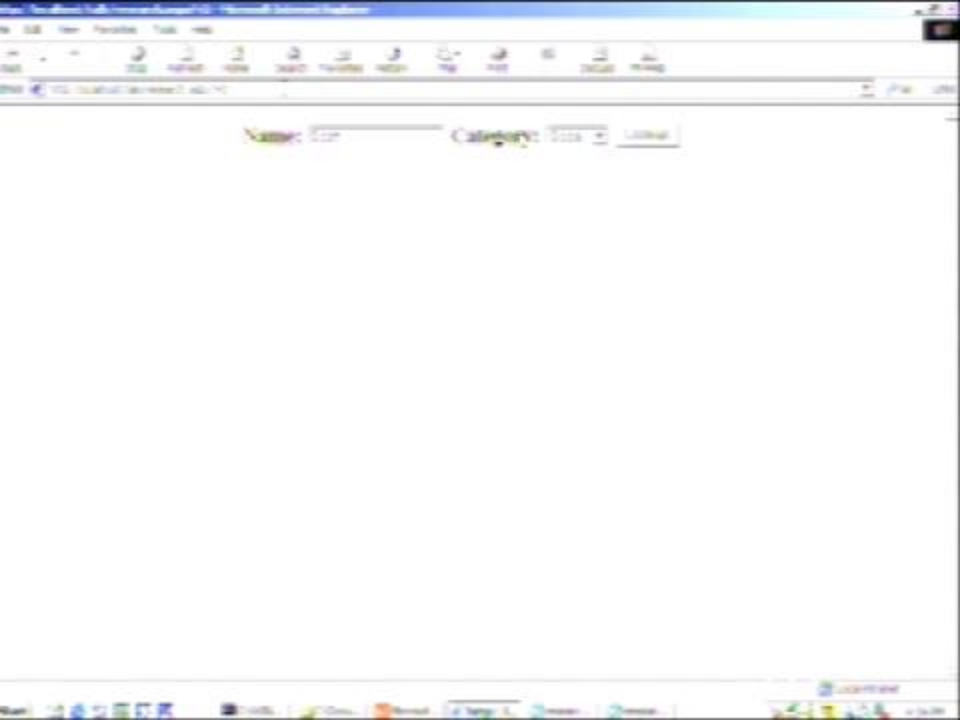
```
Category: <asp:dropdownlist id="Category" runat="server">  
    <asp:listitem value=1>Milk</asp:listitem>  
    <asp:listitem value=2>Cereal</asp:listitem>  
    <asp:listitem value=3>Soda</asp:listitem>  
</asp:dropdownlist>
```

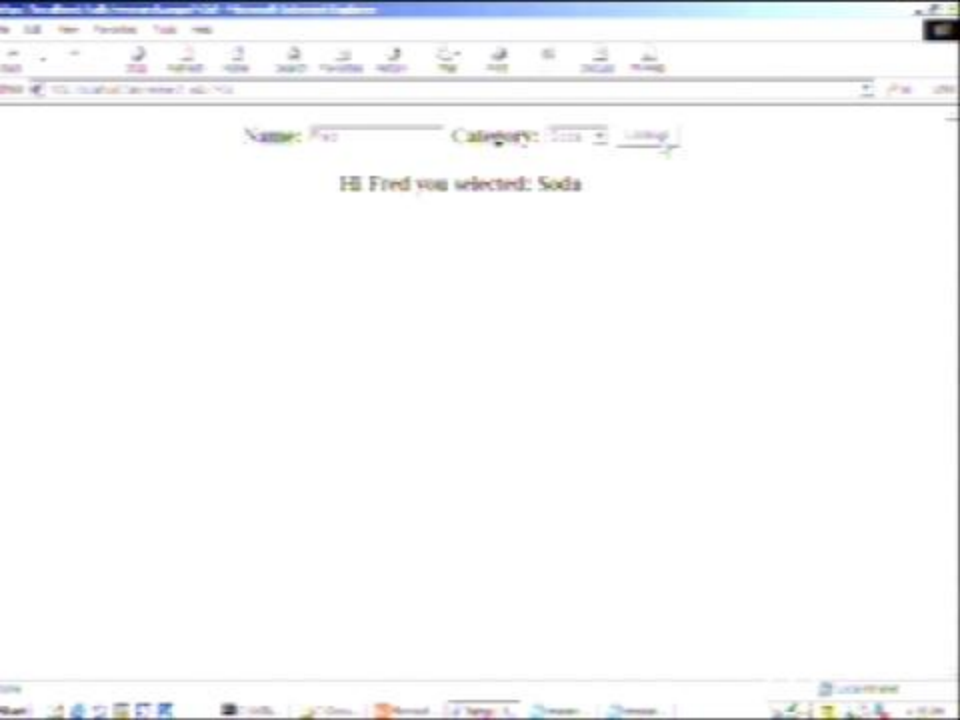
```
asp:button text="Lookup" runat="server"/>
```

```
br> <br>
```

```
asp:label id="Message" runat="server"/>
```

```
</>
```





Name: Category:

Hi Fred you selected: Soda


```

html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>

<script language="VB" runat=server>

  sub Page_Load(sender as Object, e as EventArgs)
    Message.Text = "Hi " & Name.Text & " you selected: " & Category
  end sub

</script>

<body>

  <form method="post" runat=server>

    <h3> Name: <asp:textbox id="Name" runat=server/>

    Category: <asp:dropdownlist id="Category" runat=server>
      <asp:listitem value=1>Milk</asp:listitem>
      <asp:listitem value=2>Cereal</asp:listitem>
      <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>

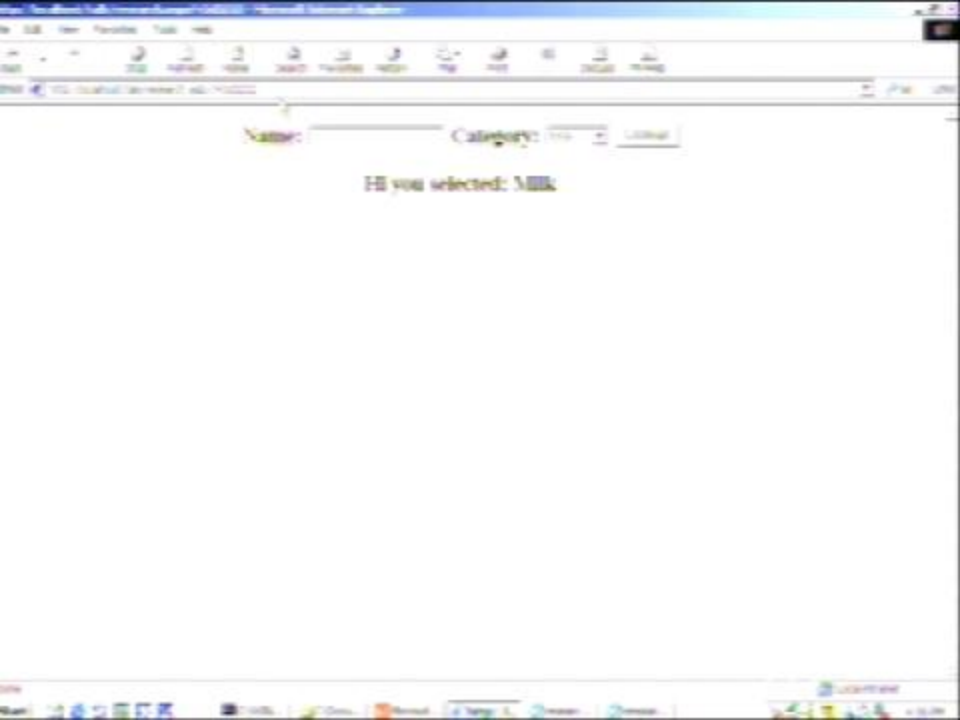
    <asp:button text="Lookup" runat=server/>

    <br><br>

    <asp:label id="Message" runat=server/>

  </form>

```



```

<html>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>

<script language="VB" runat=server>

  sub Page_Load(sender as Object, e as EventArgs)
    Message.Text = "Hi " & Name.Text & " you selected: " & Category
  end sub

</script>

<body>

  <form method="post" runat=server>

    <h3> Name: <asp:textbox id="Name" runat=server/>

    Category: <asp:dropdownlist id="Category" runat=server>
      <asp:listitem value=1>Milk</asp:listitem>
      <asp:listitem value=2>Cereal</asp:listitem>
      <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>

    <asp:button text="Lookup" runat=server/>

    <br><br>

    <asp:label id="Message" runat=server/>

  </form>

```

```

html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>

<script language="v8" runat=server>

    sub submitbtn_click(sender as Object, e as EventArgs)
        Message.Text = "Hi " & Name.Text & " you selected: " & Category
    end sub

</script>

<body>

    <form method="post" runat=server>

        <h3> Name: <asp:textbox id="Name" runat=server/>

        Category: <asp:dropdownlist id="Category" runat=server>
            <asp:listitem value=1>Milk</asp:listitem>
            <asp:listitem value=2>Cereal</asp:listitem>
            <asp:listitem value=3>Soda</asp:listitem>
        </asp:dropdownlist>

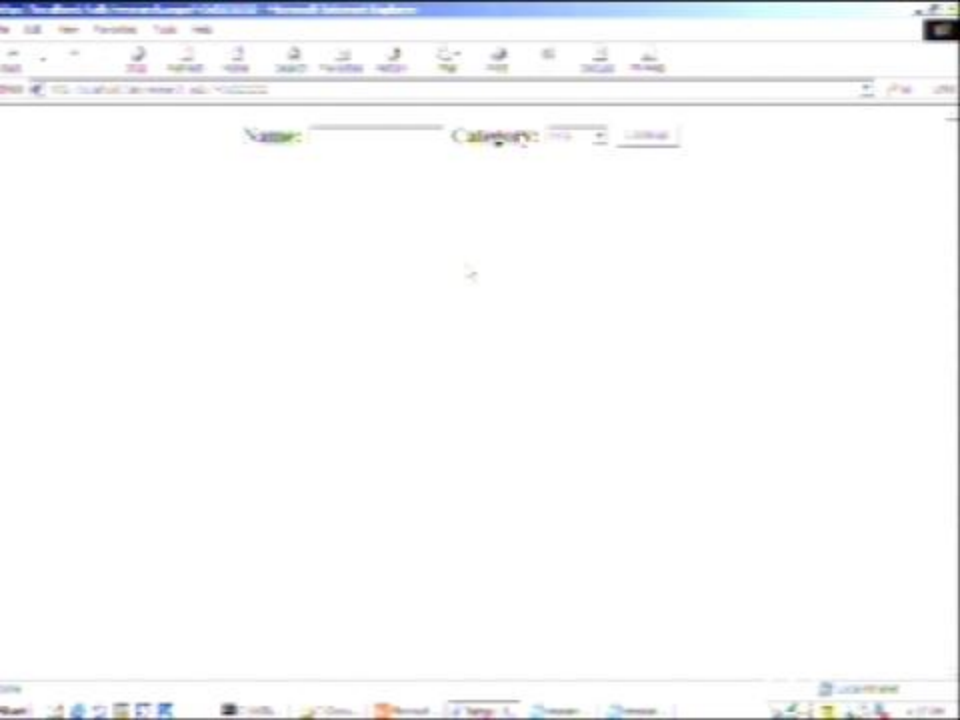
        <asp:button text="Lookup" onclick="submitbtn_click" runat=server>

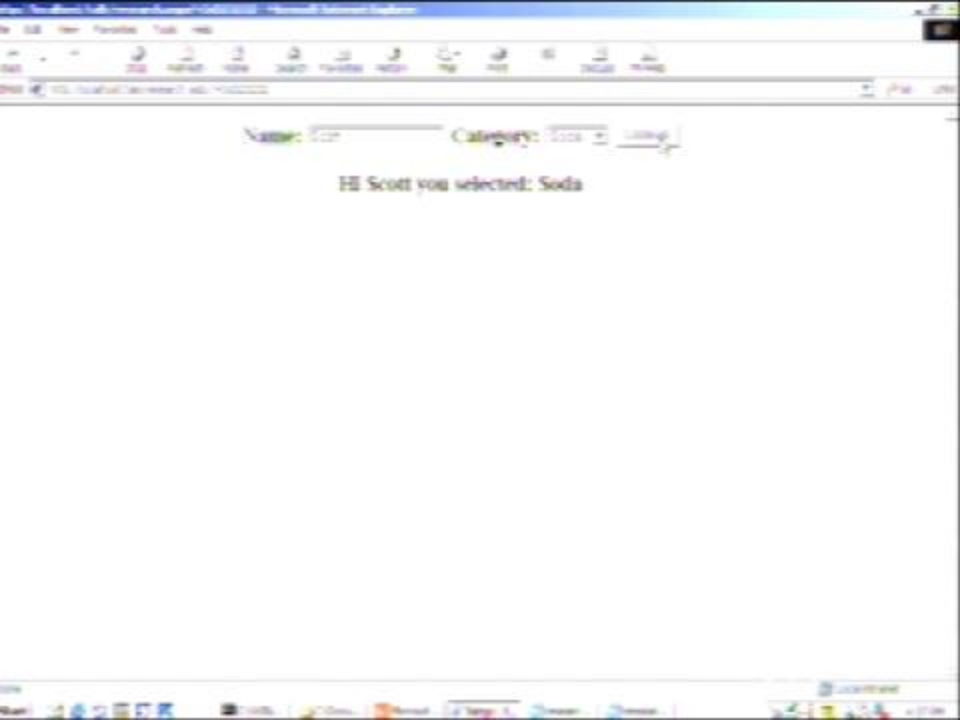
        <br><br>

        <asp:label id="Message" runat=server/>

    </form>

```





```
<link rel="stylesheet" href="walkthrough.css">
</head>

<body>

  <form name="ctrl2" method="post" action="research.aspx?43d323232"
    <input type="hidden" name="__VIEWSTATE" value="a0z860938_a0z"

    <h3> Name: <input name="Name" type="text" value="scott" id=""

    category: <select name="category" id="category">
      <option value="1">Milk</option>
<option value="2">cereal</option>
<option selected value="3">soda</option>
</select>

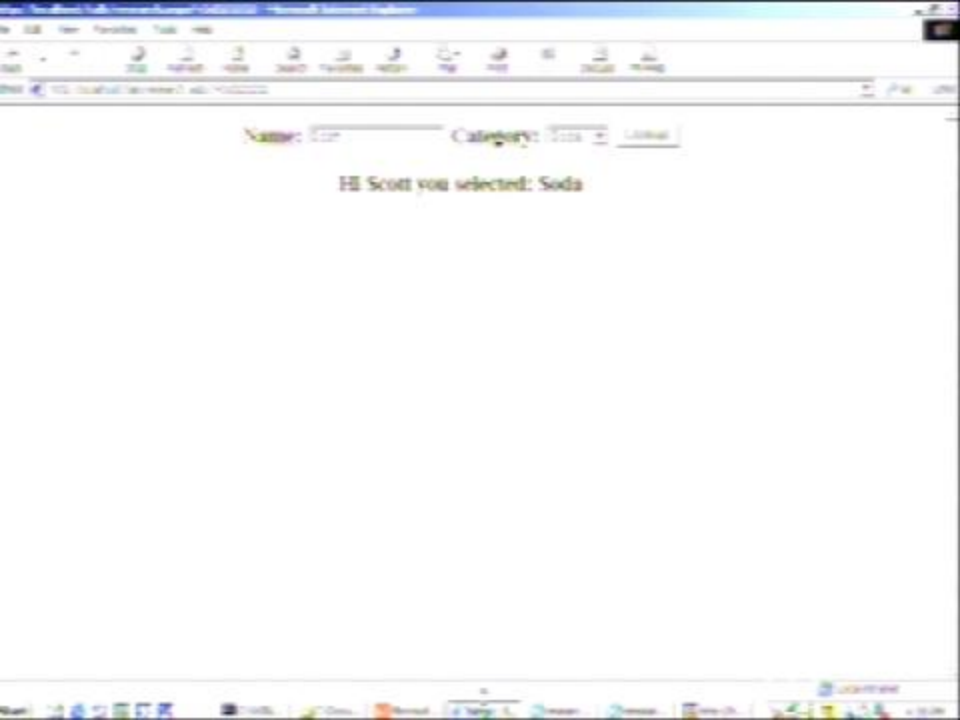
    <input type="submit" name="ctrl6" value="Lookup">

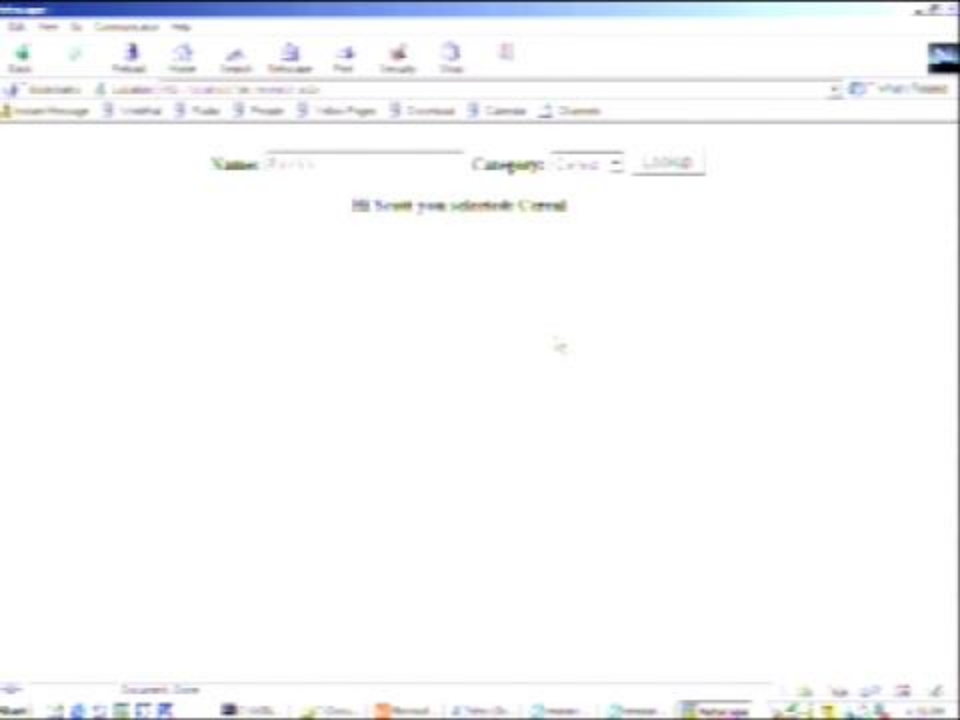
    <br><br>

    <span id="Message">Hi Scott you selected: Soda</span>

  </form>

</body>
</html>
```





```
HTML>
<head>
  <link rel="stylesheet" href="walkthrough.css">
</head>

<script language="VB" runat=server>

  sub submitbtn_click(sender as Object, E as EventArgs)
    Message.Text = "Hi " & Name.Text & " you selected: " & Category
  end sub

</script>

<body>
  <asp:adrotator AdvertisementFile="ads.xml" runat=server/>

  <form method="post" runat=server>

    <h3> Name: <asp:textbox id="Name" runat=server/>

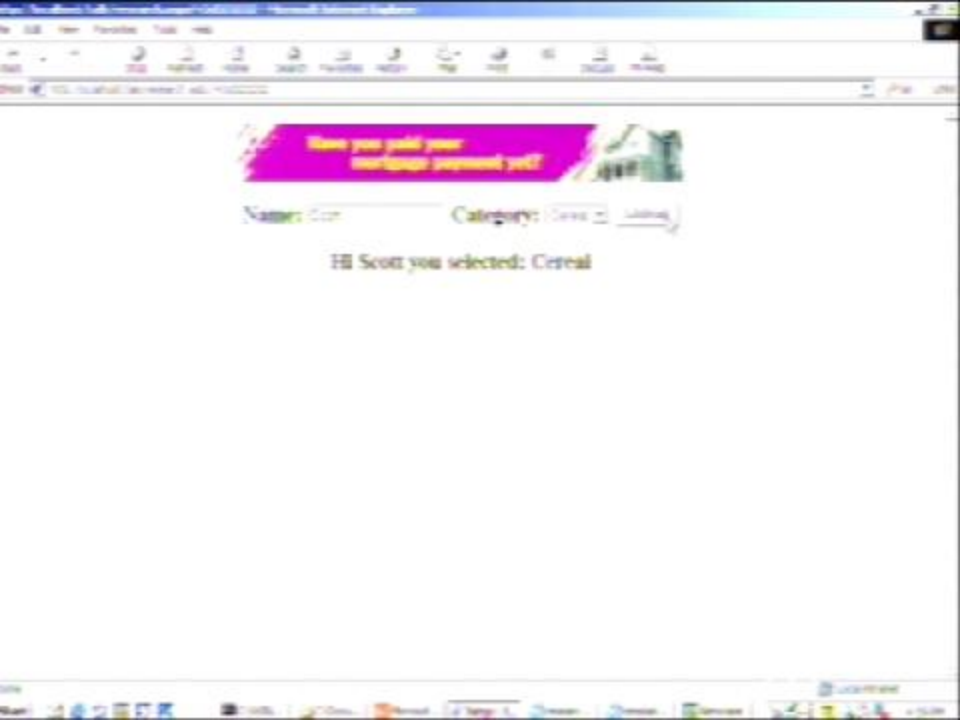
    category: <asp:dropdownlist id="category" runat=server>
      <asp:listitem value=1>Milk</asp:listitem>
      <asp:listitem value=2>Cereal</asp:listitem>
      <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>

    <asp:button text="Lookup" onclick="submitbtn_click" runat=server/>

    <br><br>

    <asp:label id="Message" runat=server/>

  </form>
</body>
</html>
```



```
<script language="vb" runat=server>

    sub submitbtn_click(sender as Object, e as EventArgs)
        Message.Text = "Hi " & Name.Text & " you selected: " & Category
    End Sub

</script>

<body>

    <asp:adrotator AdvertisementFile="ads.xml" runat=server/>

    <form method="post" runat=server>

        <h3> Name: <asp:textbox id="Name" runat=server/>

        Category: <asp:dropdownlist id="Category" runat=server>
            <asp:listitem value=1>Milk</asp:listitem>
            <asp:listitem value=2>Cereal</asp:listitem>
            <asp:listitem value=3>Soda</asp:listitem>
        </asp:dropdownlist>

        <asp:button text="Lookup" OnClick="SubmitBtn_Click" runat=server/>

        <br><br>

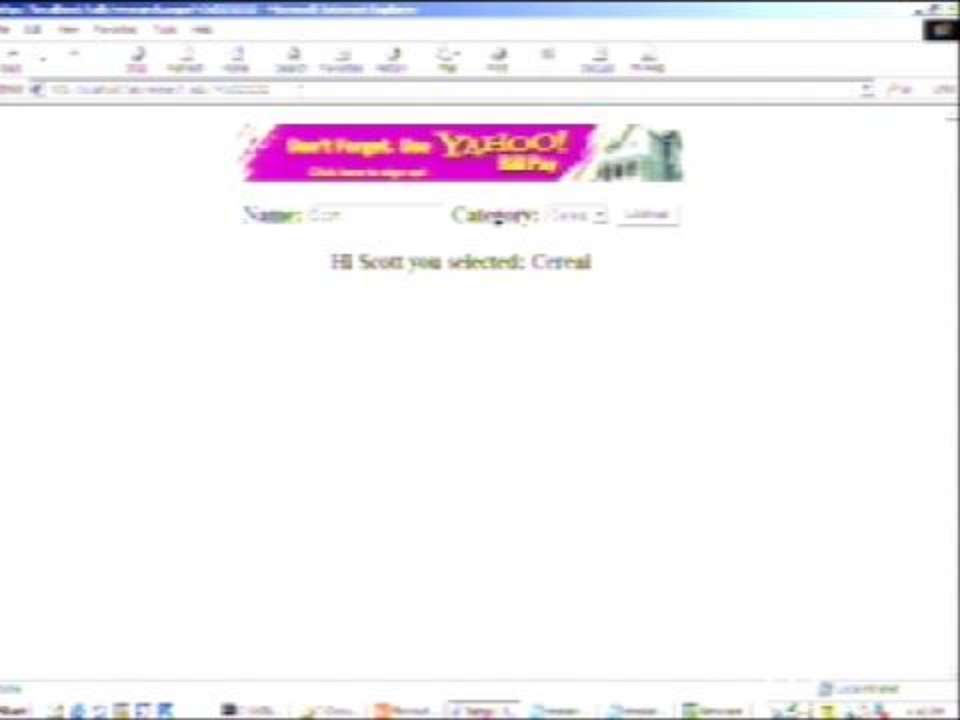
        <Acme:Calendar id="MyCal" runat=server/>

        <br>

        <asp:label id="Message" runat=server/>

    </form>

</body>
```



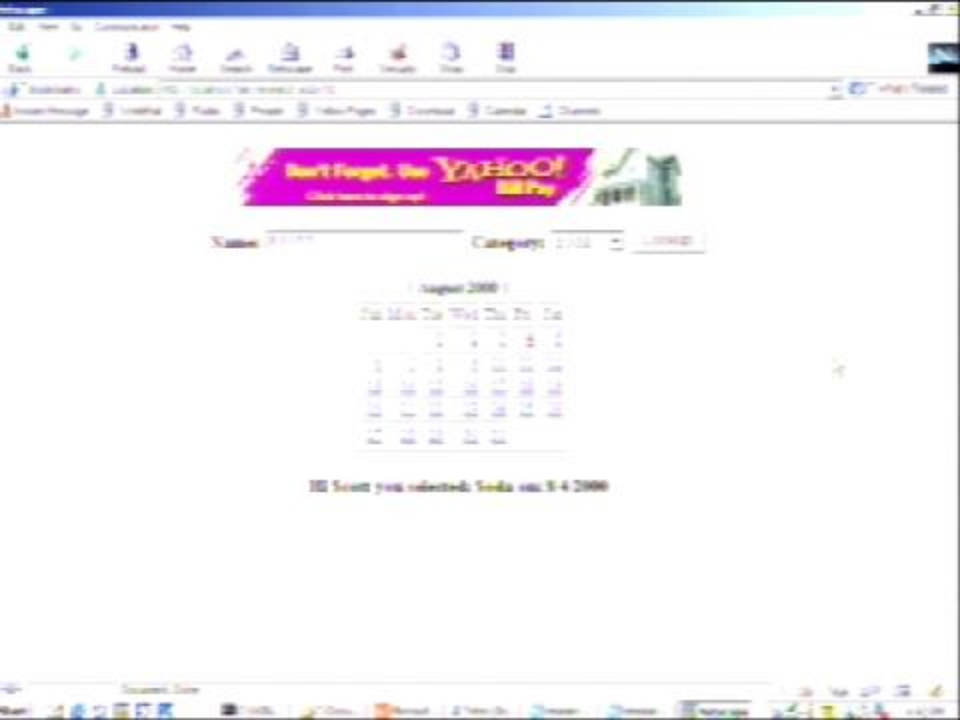


Name: Category:

September 2000

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Hi Scott you selected: Cereal on: 9/16/2000



```
<script language="vb" runat=server>

    Sub SubmitBtn_Click(Sender as Object, E as EventArgs)
        Message.Text = "Hi " & Name.Text & " you selected: " & Category
    End Sub

</script>

<body>

    <asp:adrotator AdvertisementFile="ads.xml" runat=server/>

    <form method="post" runat=server>

        <h3> Name: <asp:textbox id="Name" runat=server/>

        Category: <asp:dropdownlist id="Category" runat=server>
            <asp:listitem value=1>Milk</asp:listitem>
            <asp:listitem value=2>Cereal</asp:listitem>
            <asp:listitem value=3>Soda</asp:listitem>
        </asp:dropdownlist>

        <asp:button text="Lookup" onclick="submitbtn_click" runat=server/>

        <br><br>

    </form>

</body>
</html>
```

```

<script language="vb" runat=server>
    Sub SubmitBtn_Click(Sender as Object, E as EventArgs)
        Message.Text = "Hi " & Name.Text & " you selected: " & Category
    End Sub
</script>
<body>
    <asp:adrotator AdvertisementFile="ads.xml" runat=server/>
    <form method="post" runat=server>
        <h3> Name: <asp:textbox id="Name" runat=server/>
        Category: <asp:dropdownlist id="Category" runat=server>
            <asp:listitem value=1>Milk</asp:listitem>
            <asp:listitem value=2>Cereal</asp:listitem>
            <asp:listitem value=3>Soda</asp:listitem>
        </asp:dropdownlist>
        <asp:button text="Lookup" onclick="submitbtn_click" runat=server/>
        <br><br>
    </form>
</body>
</html>

```

```

<script language="vb" runat=server>

    Sub SubmitBtn_Click(Sender as Object, E as EventArgs)
        Message.Text = "Hi " & Name.Text & " you selected: " & Category
    End Sub

</script>

<body>

    <asp:adrotator AdvertisementFile="ads.xml" runat=server/>

    <form method="post" runat=server>

        <h3> Name: <asp:textbox id="Name" runat=server/>

        Category: <asp:dropdownlist id="Category" runat=server>
            <asp:listitem value=1>Milk</asp:listitem>
            <asp:listitem value=2>Cereal</asp:listitem>
            <asp:listitem value=3>Soda</asp:listitem>
        </asp:dropdownlist>

        <asp:button text="Lookup" onclick="submitBtn_Click" runat=server/>

        <br><br>

        <ASP:DataGrid id="MyList" BackColor="#ccccff" HeaderStyle-Back
    </form>

</body>

```

```
<Acme:calendar id="MyCal" runat="server"/>
```

```
<br>
```

```
Message.Text = "Hi " & Name.Text & " you selected: " & Categor
```

```
*****
```

```
10 Import Namespace="System.Data" %>
```

```
10 Import Namespace="System.Data.Sql" %> :
```

```
<script language="VB" runat="server">
```

```
Sub SubmitBtn_Click(Sender As Object, E As EventArgs)
```

```
Dim MyConnection As New SqlConnection("server=localhost;userid=sa;password=sa;database=Adventureworks")
Dim MyCommand As New SqlCommand("select ProductID, ProductName, Price, CategoryID from Product")
```

```
Dim DS As New DataSet
MyCommand.FillDataSet(DS, "Titles")
```

```
MyList.DataSource = DS.Tables("Titles").DefaultView
MyList.DataBind()
```

```
End Sub
```

```
</script>
```

```
<ASP:DataGrid id="MyList" BackColor="#ccccff" HeaderStyle=Back
```

```
*****
```

```

<@ Import Namespace="System.Data" %>
<@ Import Namespace="System.Data.SqlClient" %>

html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>

<script language="VB" runat="server">

    Sub SubmitBtn_Click(Sender as Object, E as EventArgs)

        Dim MyConnection As New SqlConnection("server=localhost;uid=sa;password=sa;")
        Dim MyCommand As New SqlCommand("Select ProductID, Price, ProductName From Product")
        Dim DS as New DataSet
        MyCommand.FillDataSet(DS, "Titles")

        MyList.DataSource = DS.Tables("Titles").DefaultView
        MyList.DataBind()

    End Sub

</script>

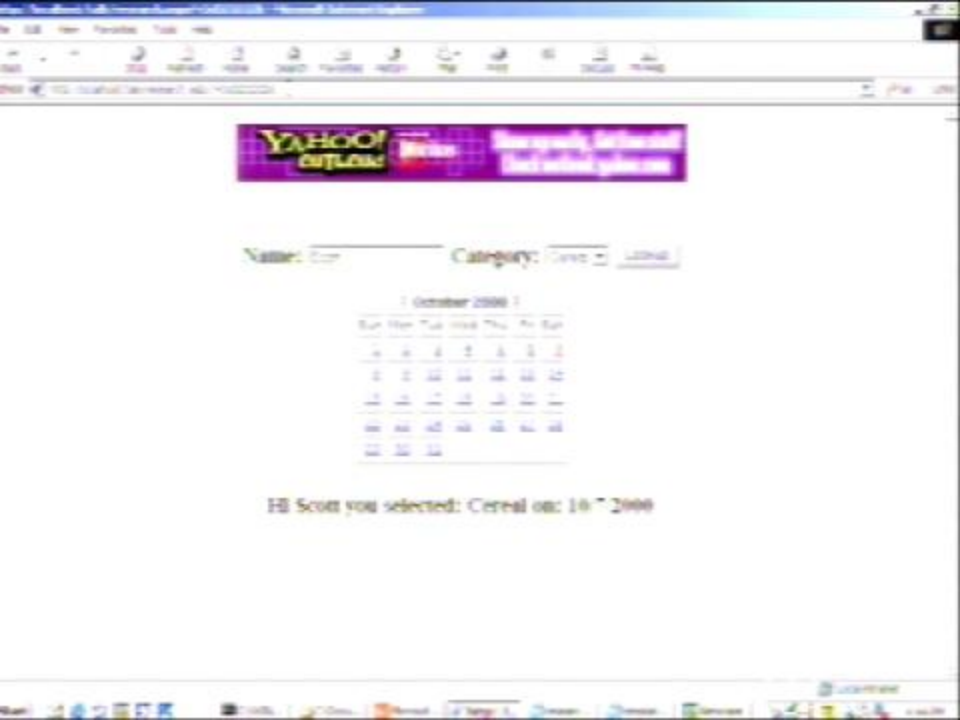
<body>

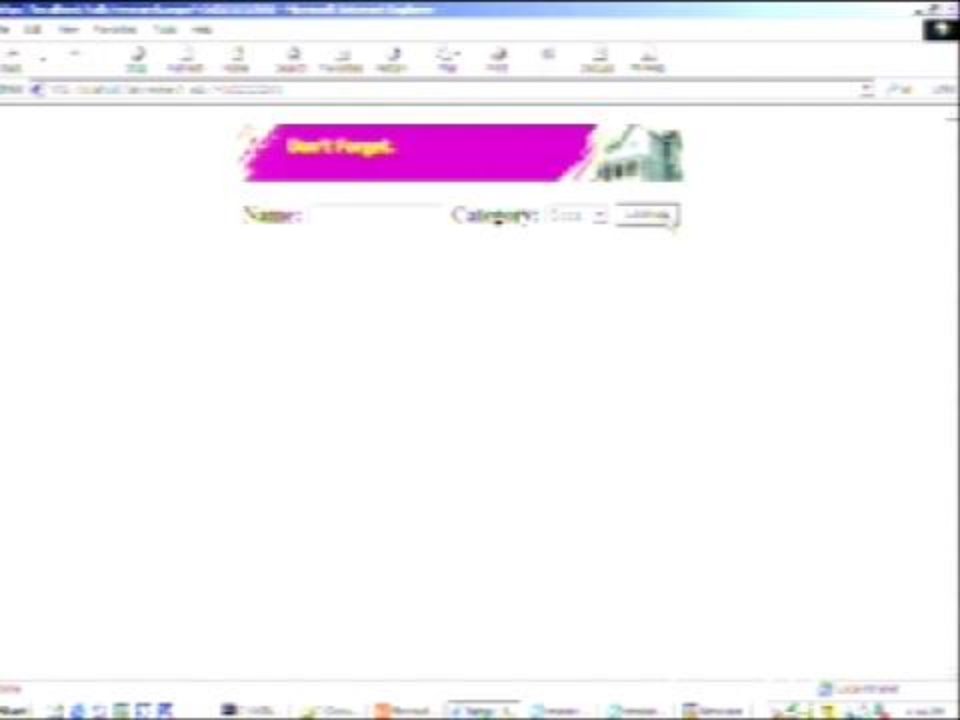
<asp:adrotator AdvertisementFile="ads.xml" runat="server"/>

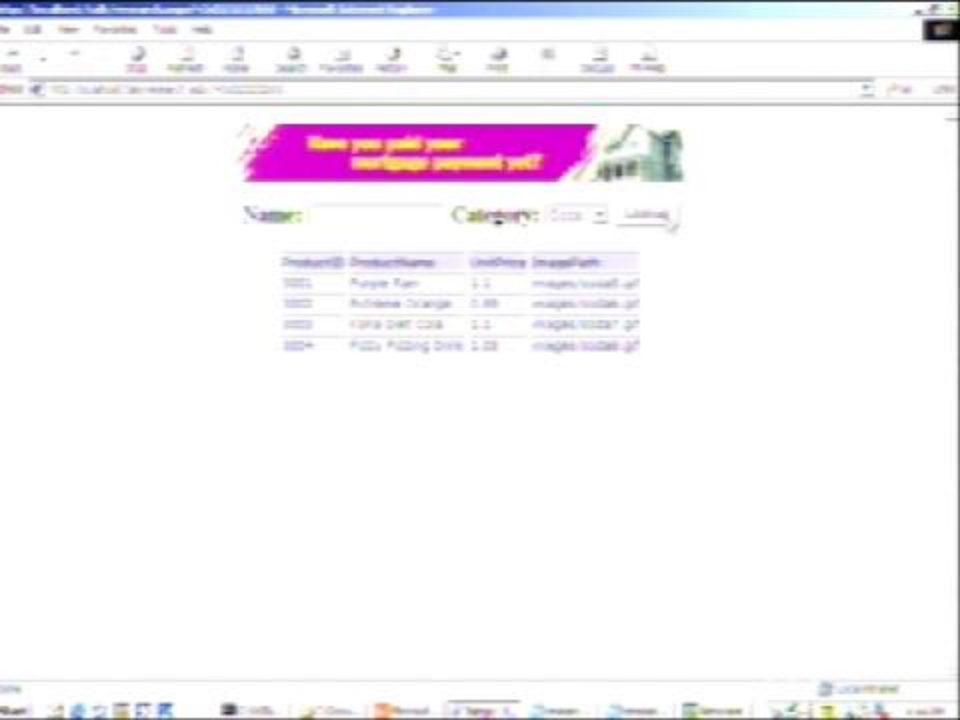
<form method="post" runat="server">

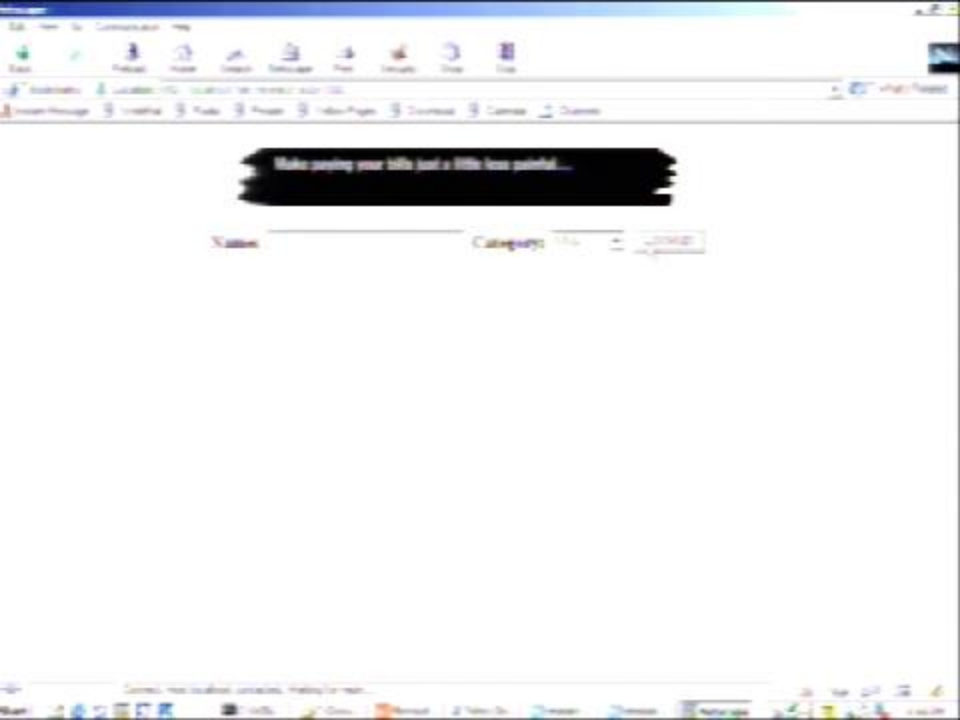
    <h3> Name: <asp:textbox id="Name" runat="server"/>

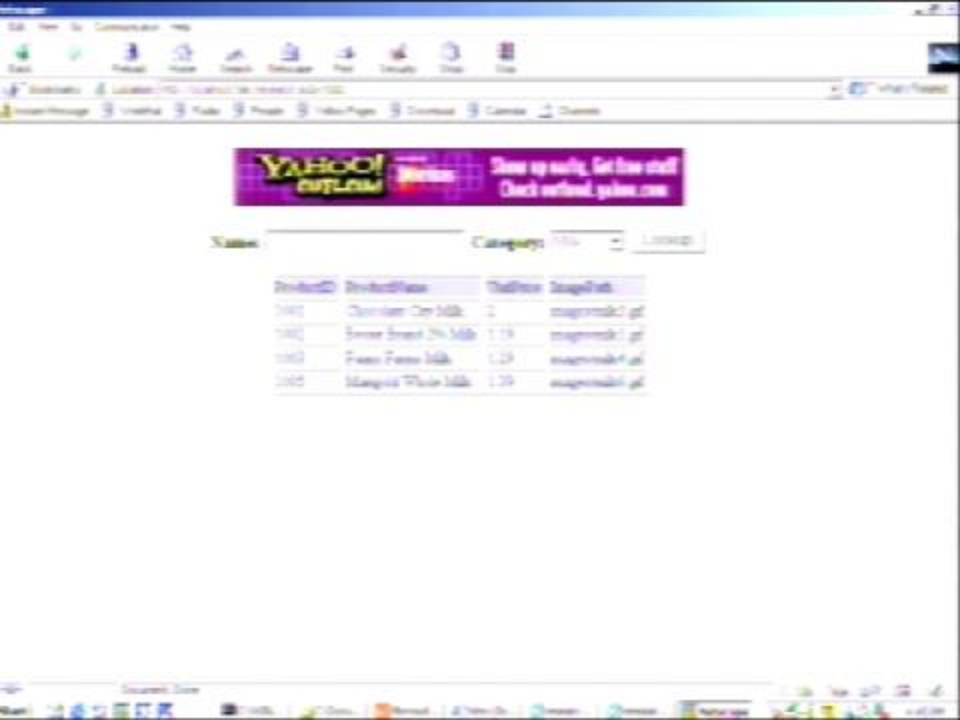
```











YAHOO!
OUTFLOW

SHOW UP EARLY,
GET FREE STUFF!

Show up early, get free stuff!
Check outflow.yahoo.com

Name:

Category:

All

Search

ProductID	ProductName	UnitPrice	ImageURL
1001	Chocolate Chip M&M's	1.29	imageurl1.gif
1002	Double Chocolate M&M's	1.29	imageurl2.gif
1003	Peppermint M&M's	1.29	imageurl3.gif
1004	Milk Chocolate M&M's	1.29	imageurl4.gif

```
<body>
```

```
<asp:adrotator AdvertisementFile="ads.xml" runat=server/>
```

```
<form method="post" runat=server>
```

```
<h3> Name: <asp:textbox id="Name" runat=server/>
```

```
Category: <asp:dropdownlist id="Category" runat=server>  
    <asp:listitem value=1>Milk</asp:listitem>  
    <asp:listitem value=2>Cereal</asp:listitem>  
    <asp:listitem value=3>Soda</asp:listitem>  
</asp:dropdownlist>
```

```
<asp:button text="Lookup" OnClick="SubmitBtn_Click" runat=server/>
```

```
<br><br>
```

```
<asp:datalist id="MyList" repeatcolumns=2 width=300 height=400>
```

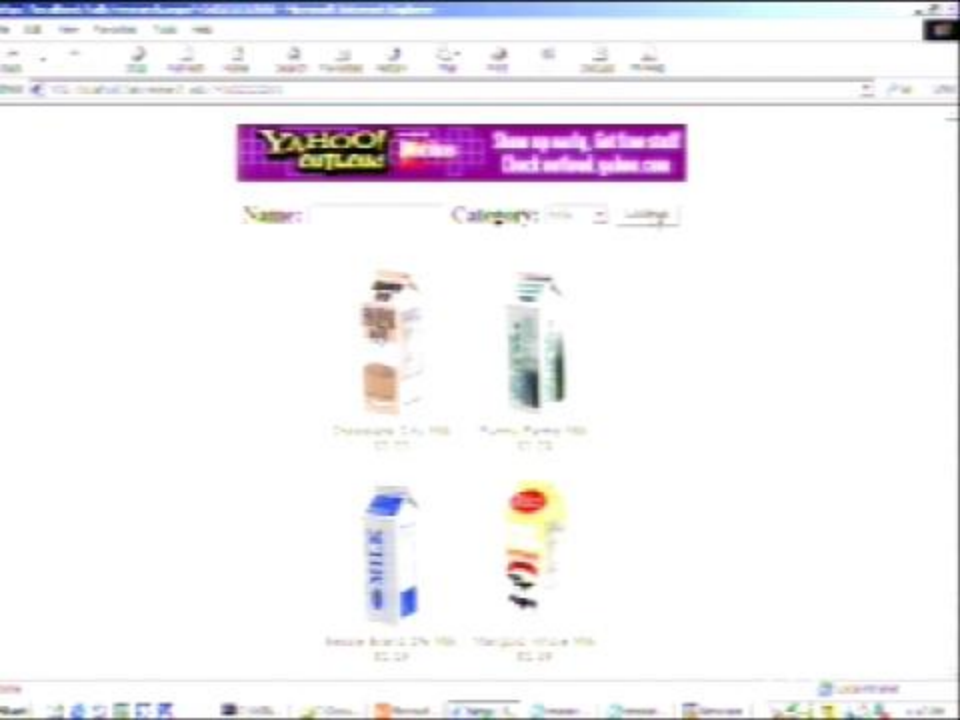
```
<template name="itemtemplate">
```

```
<center>
```

```
" />  
<%# Container.DataItem("Productname") %> <br>  
<%# System.String.Format("{0:C}", Container.DataItem("Price")) %>  
</center>
```

```
</template>
```

```
</asp:datalist>
```



```
<body>
```

```
<asp:adrotator AdvertisementFile="ads.xml" runat=server/>
```

```
<form method="post" runat=server>
```

```
<h3> Name: <asp:textbox id="Name" runat=server/>
```

```
Category: <asp:dropdownlist id="Category" runat=server>  
    <asp:listitem value=1>Milk</asp:listitem>  
    <asp:listitem value=2>Cereal</asp:listitem>  
    <asp:listitem value=3>Soda</asp:listitem>  
</asp:dropdownlist>
```

```
<asp:button text="Lookup" OnClick="SubmitBtn_Click" runat=server/>
```

```
<br><br>
```

```
<asp:datalist id="MyList" repeatcolumns= width=300 height=450  
    <template name="itemtemplate">
```

```
        <center>  
            " />  
            <%# Container.DataItem("Productname") %> <br>  
            <%# System.String.Format("{0:C}", Container.DataItem("Price")) %>  
        </center>
```

```
    </template>
```

```
</asp:datalist>
```




Name:

Category:



Chocobond 1.5kg 150



Puma Puma 150



Borden Borden 1.5kg 150



Tropicana 1.5kg 150

```

        </tr>
        <td colspan=4 height=5 bgcolor="000000"></td>
    </tr>

</template>

<template name="itemtemplate">
    <tr>
        <td colspan=3 style="font-size:10pt">
            <b><%# Container.DataItem("ProductID") %>
            <span> <%# Container.DataItem("ProductName"
        </td>
        <td align=right style="font-size:10pt">
            <b><%# System.String.Format("{0:C}", Conts
        </td>
    </tr>
</template>

<template name="separatortemplate">
    <tr>
        <td colspan=4 height=1 bgcolor="000000"></td>
    </tr>
</template>

<template name="footertemplate">
    <tr>
        <td colspan=4 height=5 bgcolor="000000"></td>
    </tr>
</table>
</template>

</asp:datalist>

```



Name: Category:



Chocobond 2.4% Milk
£1.10



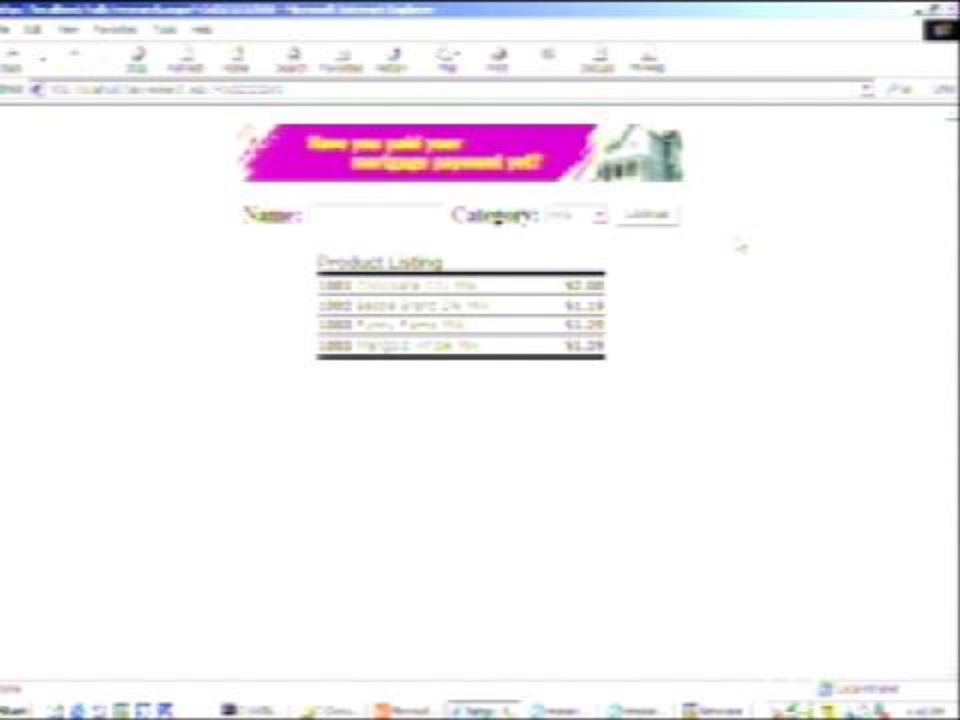
Purity 2.4% Milk
£1.10



Borden 2.4% Milk
£1.10



The Gold 2.4% Milk
£1.10



Have you paid your mortgage payment yet?

Name:

Category:

Calculate

Product Listing

1000	Chocolate City 100	\$2.00
1000	Golden Grand 100	\$1.50
1000	Purple Pines 100	\$1.20
1000	Strawberry 100	\$1.20

```
oim DS as New DataSet
MyCommand.FillDataSet(DS, "Titles")

MyList.DataSource = DS.Tables("Titles").DefaultView
MyList.DataBind()
```

```
End Sub
```

```
</script>
```

```
<body>
```

```
<asp:adrotator AdvertisementFile="ads.xml" runat=server/>
```

```
<form method="post" runat=server>
```

```
<h3> Name: <asp:textbox id="Name" runat=server/>
```

```
Category: <asp:dropdownlist id="Category" runat=server>
  <asp:listitem value=1>Milk</asp:listitem>
  <asp:listitem value=2>Cereal</asp:listitem>
  <asp:listitem value=3>Soda</asp:listitem>
</asp:dropdownlist>
```

```
<asp:button text="Lookup" OnClick="SubmitBtn_Click" runat=ser-
```

```
<br><br>
```

```
<asp:datalist id="MyList" repeatcolumns=2 width=300 height=4!
  <template name="itemtemplate">
```

```
end sub
```

```
</script>
```

```
<body>
```

```
<asp:adrotator AdvertisementFile="ads.xml" runat=server/>
```

```
<form method="post" runat=server>
```

```
<h3> Name: <asp:textbox id="Name" runat=server/>
```

```
Category: <asp:dropdownlist id="Category" runat=server>  
    <asp:listitem value=1>Milk</asp:listitem>  
    <asp:listitem value=2>cereal</asp:listitem>  
    <asp:listitem value=3>Soda</asp:listitem>  
</asp:dropdownlist>
```

```
<asp:button text="Lookup" OnClick="SubmitStn_Click" runat=ser
```

```
<br><br>
```

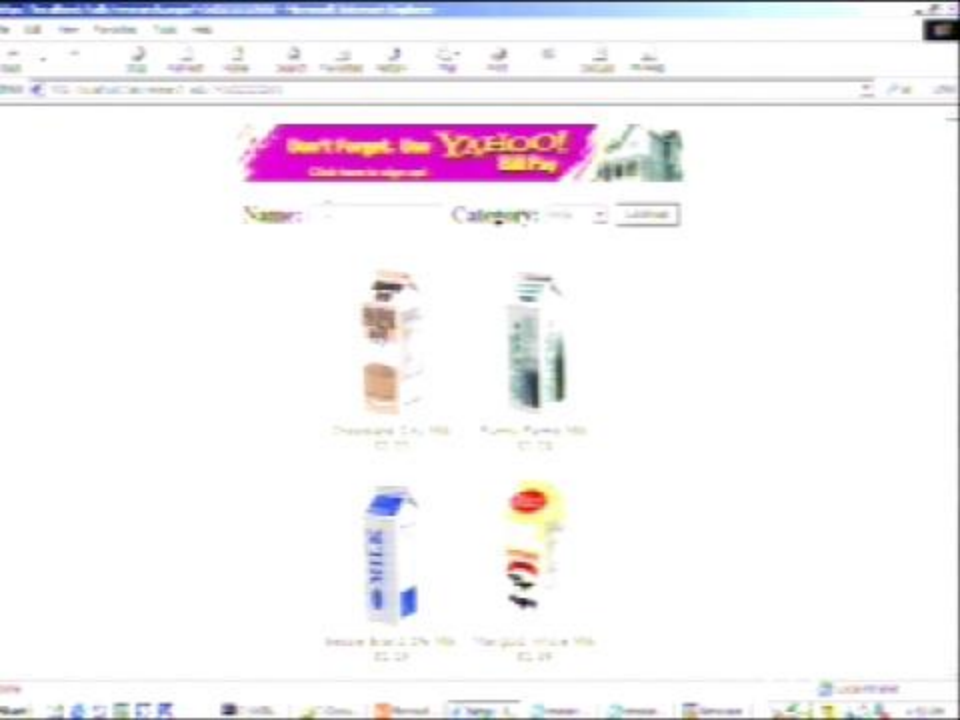
```
<asp:datalist id="MyList" repeatcolumns=2 width=300 height=40
```

```
<template name="itemtemplate">
```

```
<center>
```

```
" />  
<# Container.DataItem("ProductName") %> <br>  
<# System.String.Format("{0:c}", Container.DataItem
```

```
</center>
```




```
        colspan= <# Container.DataItem("ProductName")
    </td>
    <td align=right style="font-size:10pt">
        <b><# System.String.Format("{0:C}", Conta
    </td>
    </tr>
</template>

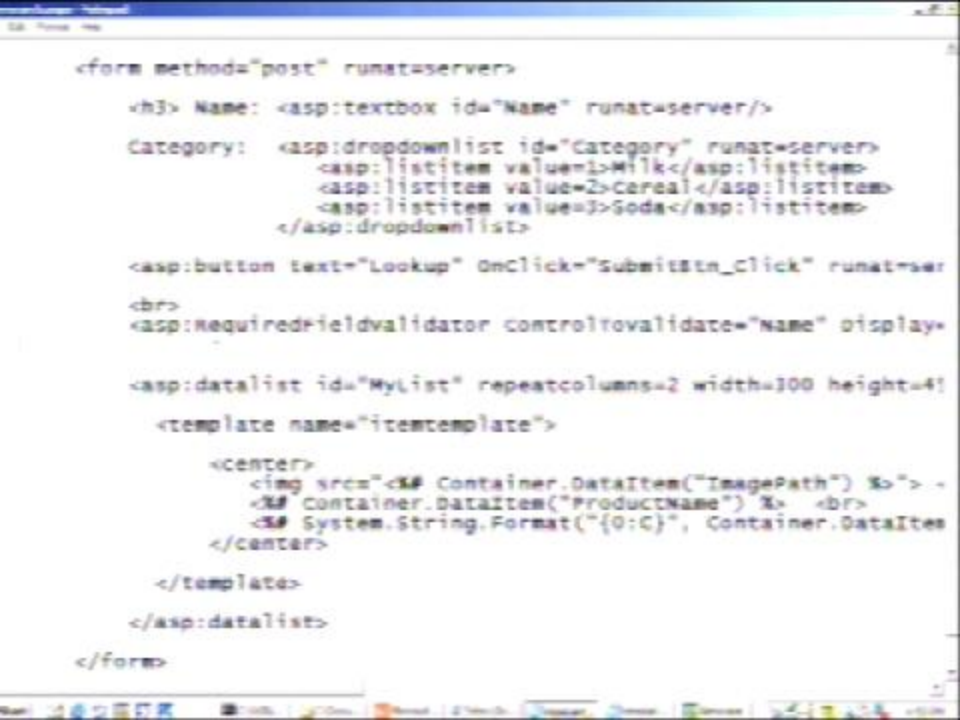
<template name="separatortemplate">
    <tr>
        <td colspan=4 height=1 bgcolor="000000"></td>
    </tr>
</template>

<template name="footertemplate">
    <tr>
        <td colspan=4 height=5 bgcolor="000000"></td>
    </tr>
</table>
</template>

</asp:datalist>
```

```
<br>
<asp:RequiredFieldValidator ControlToValidate="Name" Display=
<asp:RequiredFieldValidator ControlToValidate="Category" Dist
```

```
If (Page.IsValid) Then
```



```
<form method="post" runat="server">
```

```
  <h3> Name: <asp:textbox id="Name" runat="server"/>
```

```
  Category: <asp:dropdownlist id="Category" runat="server">
    <asp:listitem value=1>Milk</asp:listitem>
    <asp:listitem value=2>Cereal</asp:listitem>
    <asp:listitem value=3>Goda</asp:listitem>
  </asp:dropdownlist>
```

```
  <asp:button text="Lookup" onclick="submitBtn_Click" runat="ser
```

```
  <br>
```

```
  <asp:requiredfieldvalidator controltovalidate="Name" display=
```

```
  <asp:datalist id="MyList" repeatcolumns=2 width=300 height=41
```

```
    <template name="itemtemplate">
```

```
      <center>
```

```
        " >
```

```
        <%# Container.DataItem("ProductName") %> <br>
```

```
        <%# System.String.Format("{0:C}", Container.DataItem
```

```
      </center>
```

```
    </template>
```

```
  </asp:datalist>
```

```
</form>
```

```

<form method="post" runat=server>

    <h3> Name: <asp:textbox id="Name" runat=server/>

    Category: <asp:dropdownlist id="Category" runat=server>
        <asp:listitem value=1>Milk</asp:listitem>
        <asp:listitem value=2>Cereal</asp:listitem>
        <asp:listitem value=3>Goda</asp:listitem>
    </asp:dropdownlist>

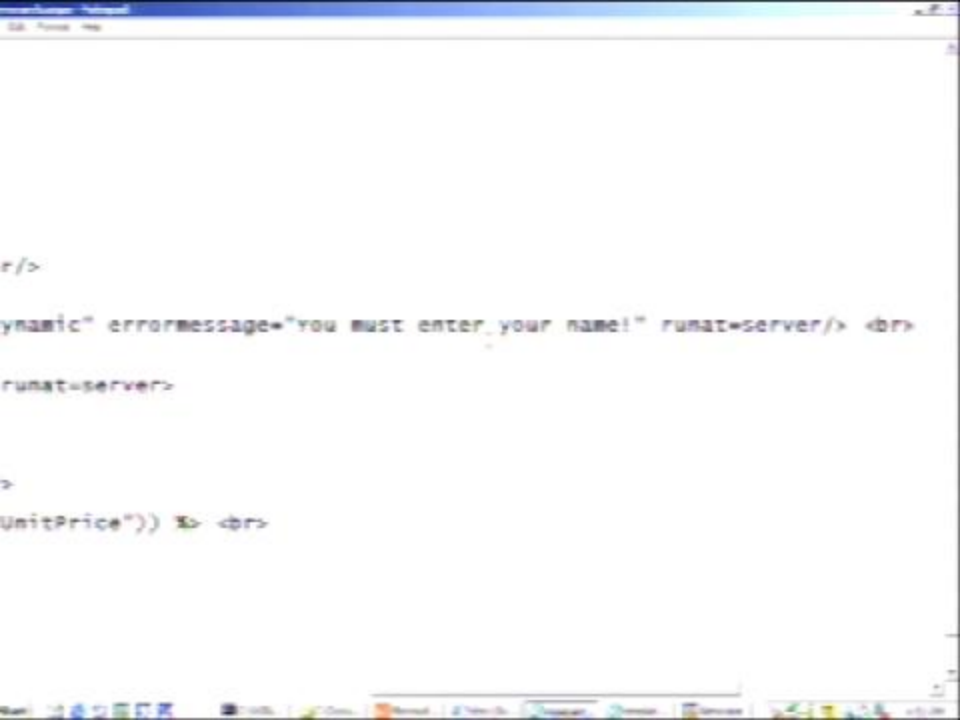
    <asp:button text="Lookup" onclick="submitBtn_Click" runat=ser

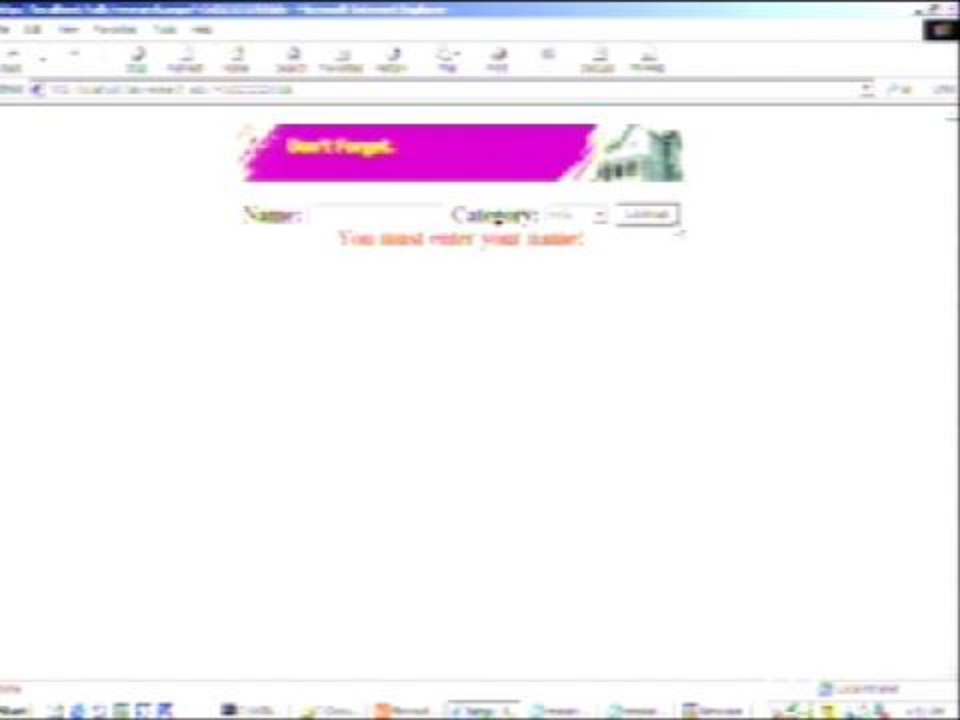
    <br>
    <asp:requiredfieldvalidator controltovalidate="Name" display=

    <asp:datalist id="MyList" repeatcolumns=2 width=300 height=41
        <template name="itemtemplate">
            <center>
                " -
                <%# Container.DataItem("ProductName") %> <br>
                <%# System.String.Format("{0:C}", Container.DataItem
            </center>
        </template>
    </asp:datalist>

</form>

```





```
<asp:server>
```

```
ox id="Name" runat=server/>
```

```
ownlist id="Category" runat=server>
```

```
stitem value=1>Milk</asp:listitem>
```

```
stitem value=2>cereal</asp:listitem>
```

```
stitem value=3>Goda</asp:listitem>
```

```
downlist>
```

```
kup" onclick="submitBtn_Click" runat=server/>
```

```
idator controltovalidate="Name" display="dynamic" errorMessage="You mu
```

```
idator ControlToValidate="Category" Display="dynamic" InitialValue="<!
```

```
list" repeatcolumns=2 width=300 height=450 runat=server>
```

```
template">
```

```
# container.DataItem("ImagePath") %>"> <br>
```

```
r.DataItem("ProductName") %> <br>
```

```
tring.Format("{0:c}", container.DataItem("unitprice")) %> <br>
```

```
<form method="post" runat=server>

    <h3> Name: <asp:textbox id="Name" runat=server/>

    Category: <asp:dropdownlist id="Category" runat=server>
        <asp:listitem><!--Select Category--></asp:listitem>
        <asp:listitem value=1>Milk</asp:listitem>
        <asp:listitem value=2>Cereal</asp:listitem>
        <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>

    <asp:button text="Lookup" onclick="SubmitBtn_Click" runat=ser

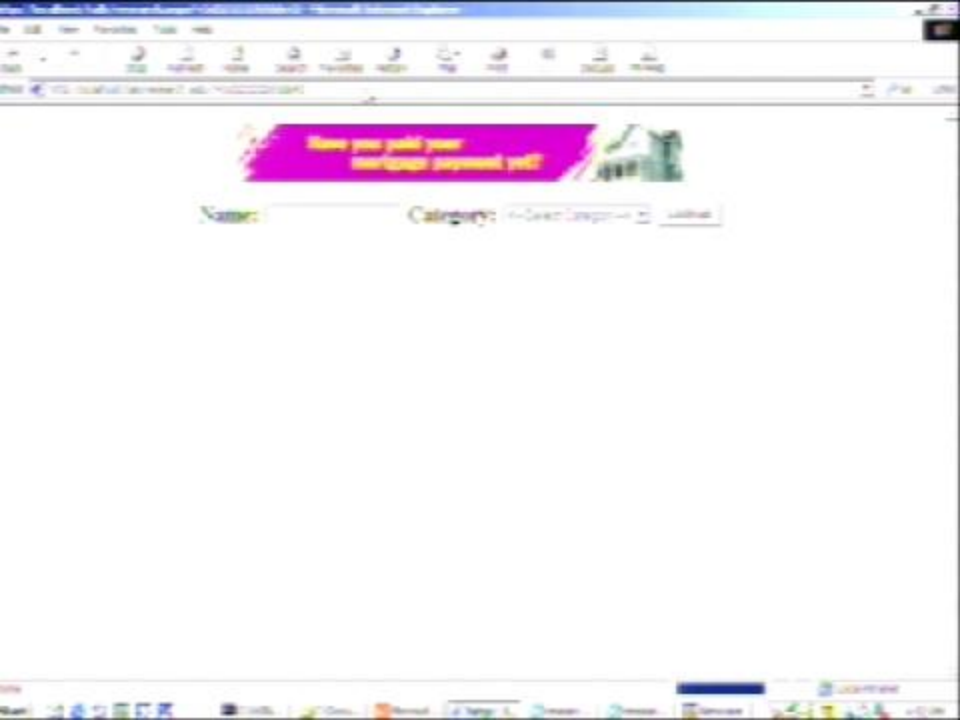
    <br>
    <asp:RequiredFieldValidator ControlToValidate="Name" Display:
    <asp:RequiredFieldValidator ControlToValidate="Category" Disp

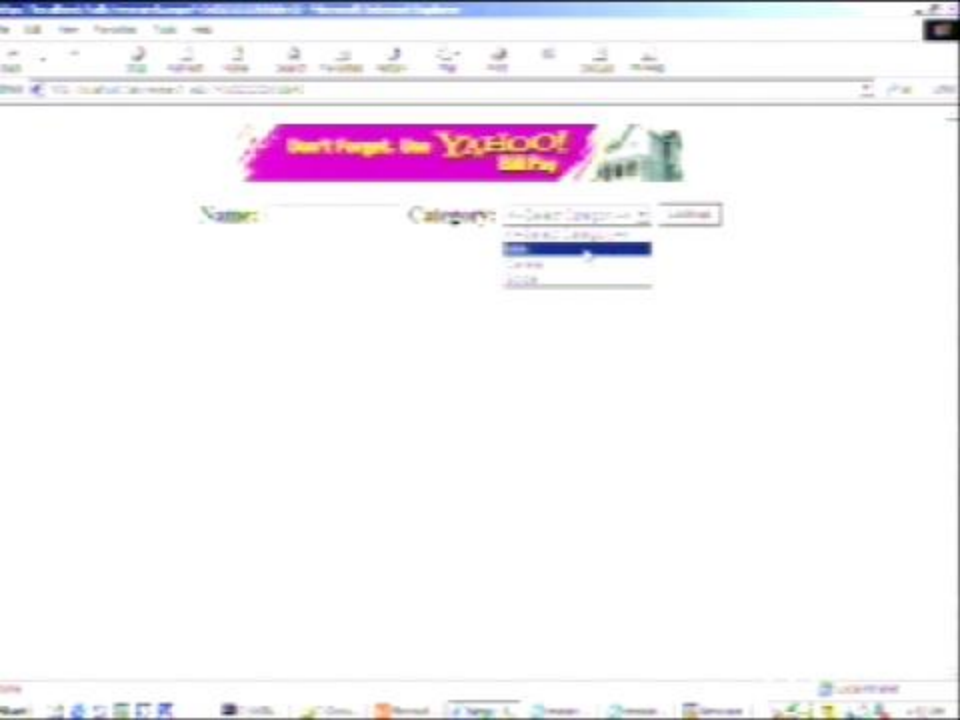
    <asp:datalist id="MyList" repeatcolumns=2 width=300 height=4!
        <template name="itemtemplate">

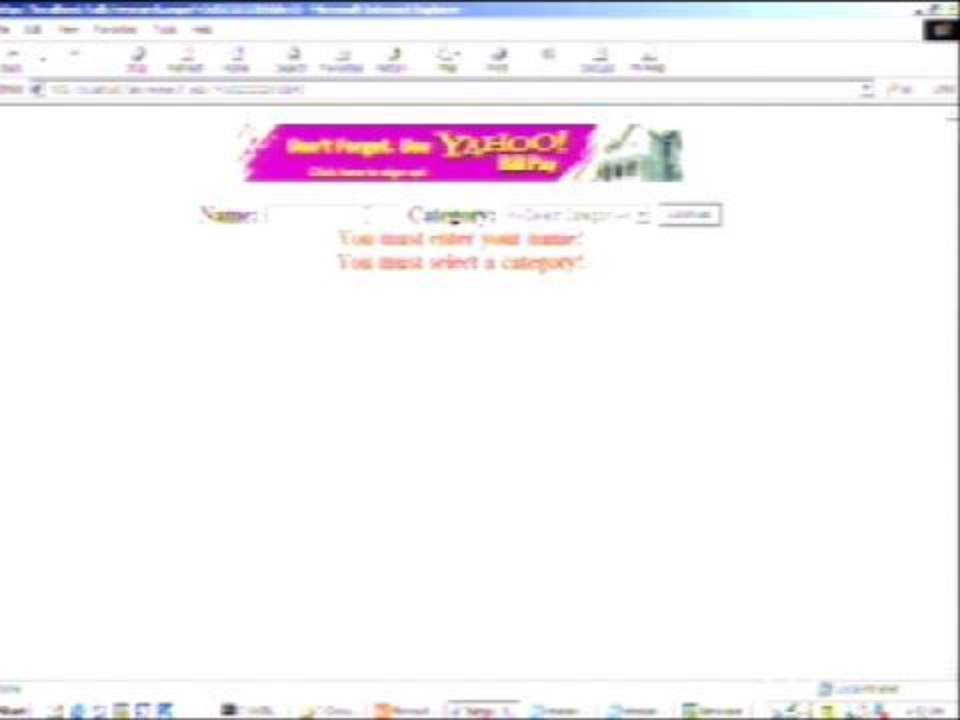
            <center>
                " -
                <% Container.DataItem("Productname") %> <br>
                <% System.String.Format("{0:C}", Container.DataItem
            </center>

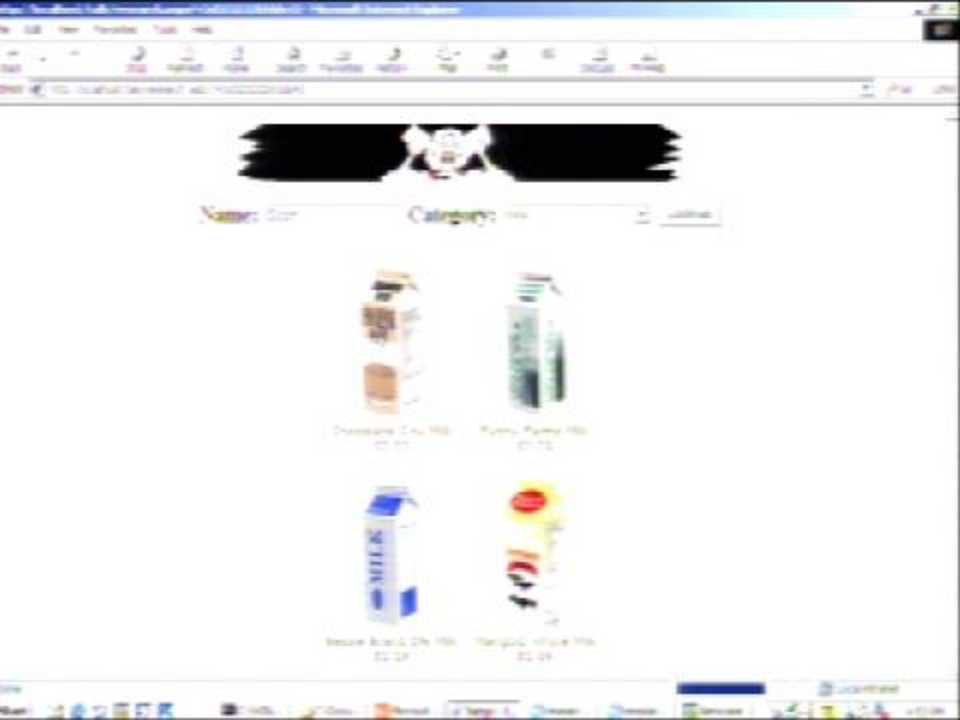
        </template>
    </asp:datalist>
```

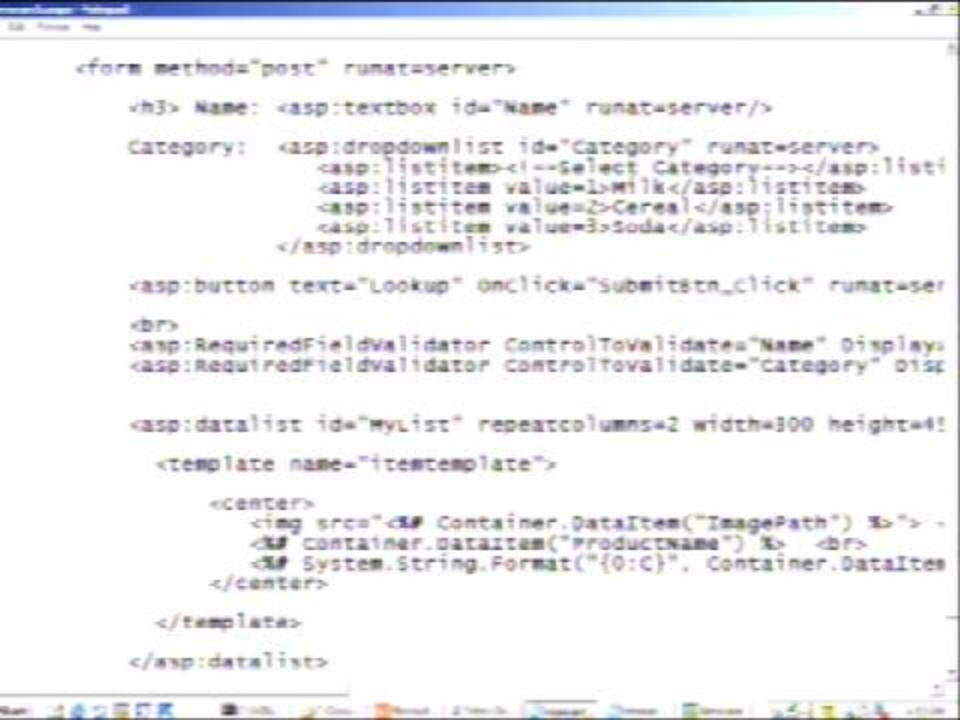
```
<asp:runat=server>  
:textbox id="Name" runat=server/>  
:dropdownlist id="Category" runat=server>  
asp:listitem<!--Select Category--></asp:listitem>  
asp:listitem value=1>Milk</asp:listitem>  
asp:listitem value=2>Cereal</asp:listitem>  
asp:listitem value=3>Soda</asp:listitem>  
asp:dropdownlist>  
rt="Lookup" onclick="SubmitBtn_Click" runat=server/>  
ieldValidator ControlToValidate="Name" Display="Dynamic" ErrorMessage=''  
ieldValidator ControlToValidate="category" Display="Dynamic" InitialVal  
id="MyList" repeatcolumns=2 width=300 height=450 runat=server>  
se="itemtemplate">  
  
src="<% Container.DataItem("ImagePath") %>"> <br>  
Container.DataItem("Productname") %> <br>  
System.String.Format("{0:C}", Container.DataItem("UnitPrice")) %> <br>
```









```
<form method="post" runat="server">
```

```
  <h3> Name: <asp:textbox id="Name" runat="server"/>
```

```
  Category: <asp:dropdownlist id="Category" runat="server">
    <asp:listitem><!--Select Category--></asp:listitem>
    <asp:listitem value=1>Milk</asp:listitem>
    <asp:listitem value=2>Cereal</asp:listitem>
    <asp:listitem value=3>Soda</asp:listitem>
  </asp:dropdownlist>
```

```
  <asp:button text="Lookup" onclick="SubmitBtn_Click" runat="server">
```

```
  <br>
```

```
  <asp:RequiredFieldValidator ControlToValidate="Name" Display="None">
```

```
  <asp:RequiredFieldValidator ControlToValidate="Category" Display="None">
```

```
  <asp:datalist id="MyList" repeatcolumns=2 width=300 height=40>
```

```
    <template name="itemtemplate">
```

```
      " />
```

```
      <# Container.DataItem("Productname") %> <br>
```

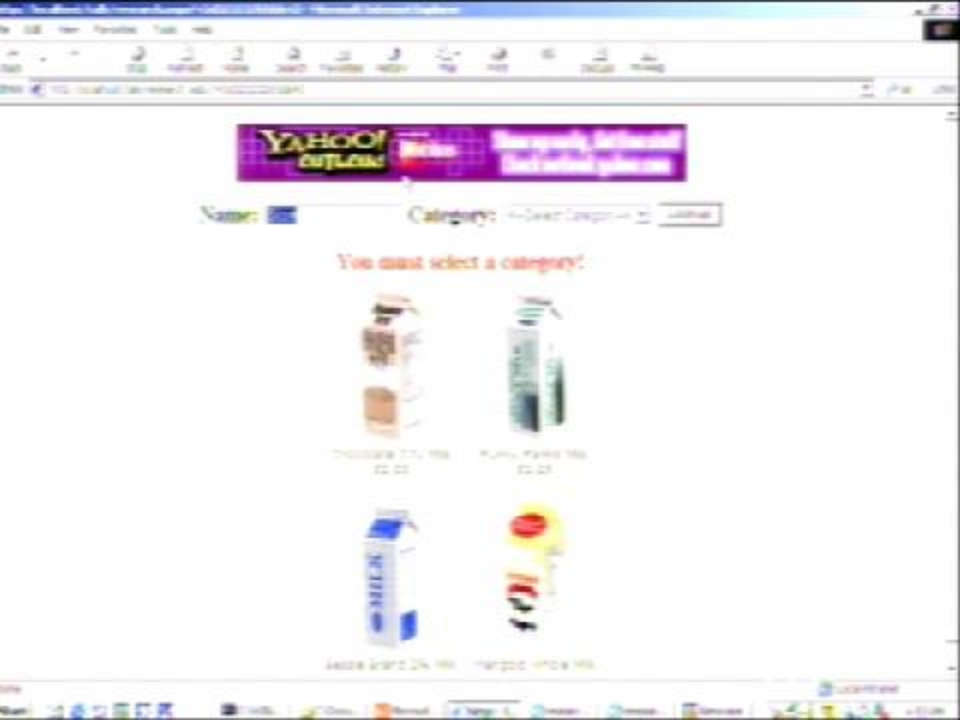
```
      <# System.String.Format("{0:C}", Container.DataItem("Price")) %>
```

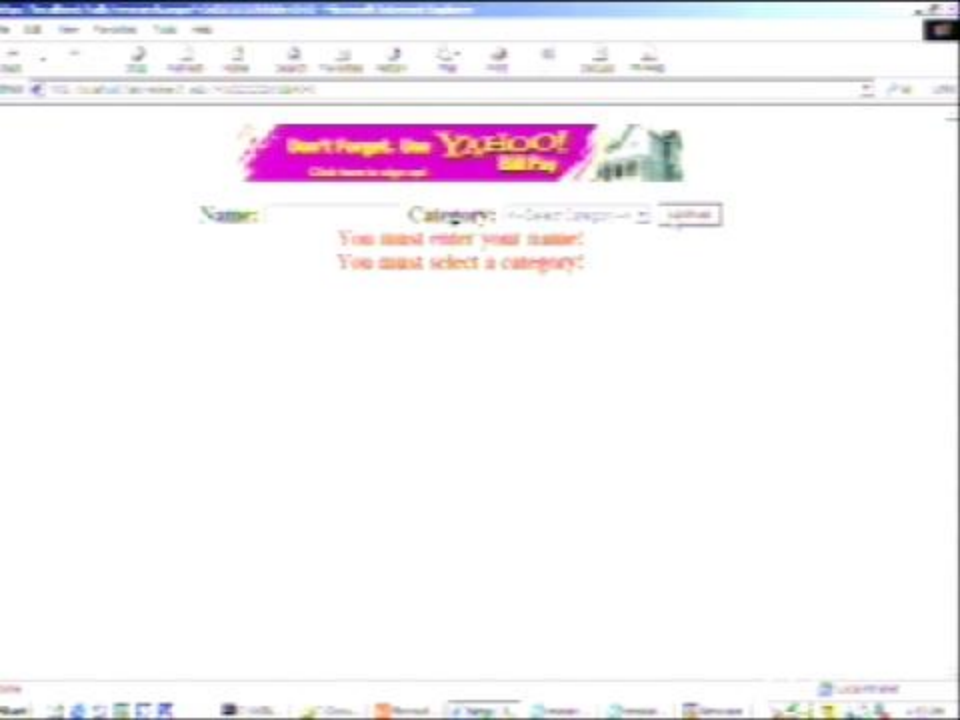
```
    </center>
```

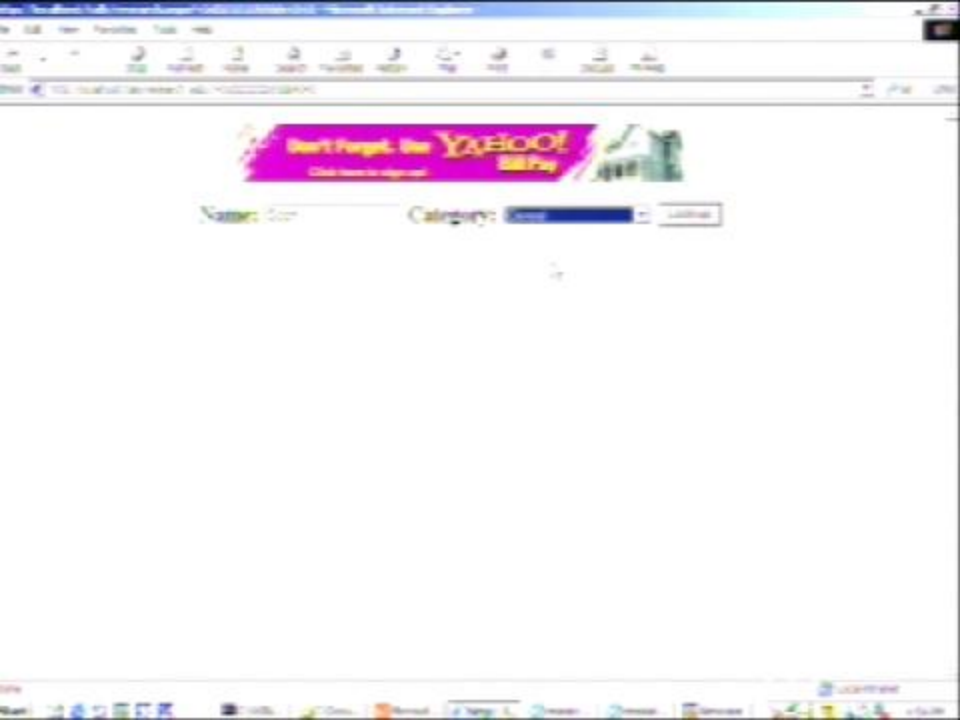
```
  </template>
```

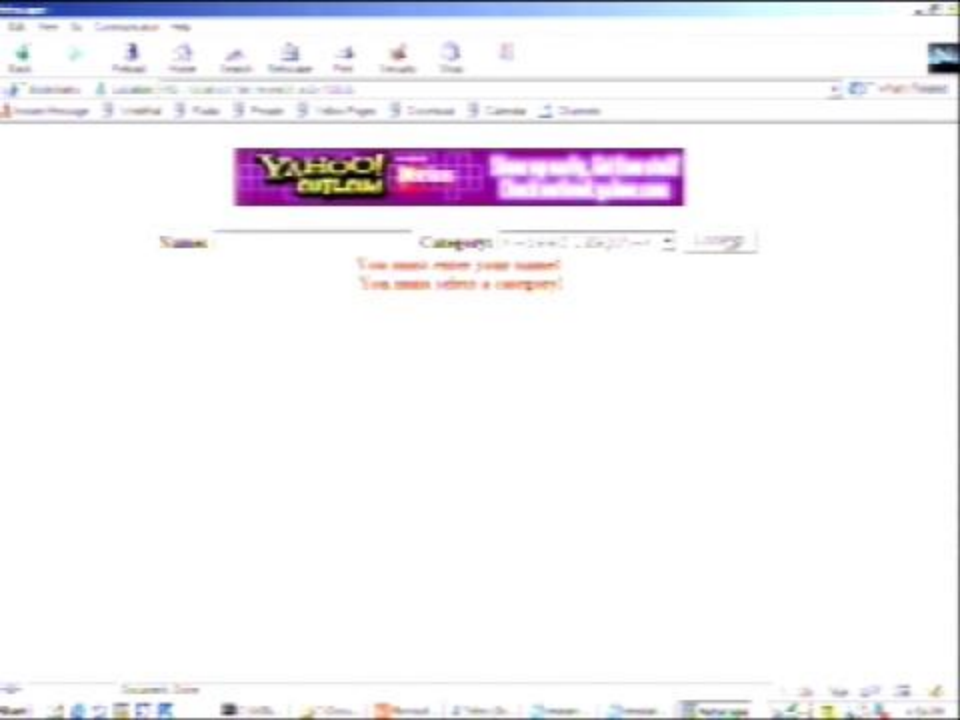
```
</asp:datalist>
```

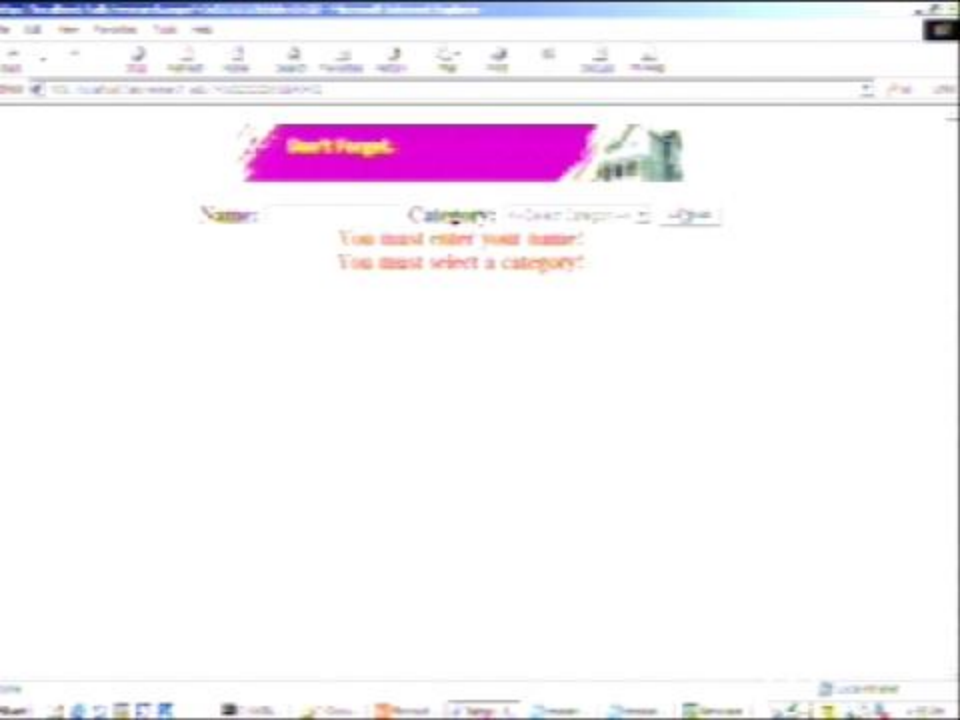
```
<@ Import Namespace="System.Data" %>  
<@ Import Namespace="System.Data.SqlClient" %>  
  
html>  
    <head>  
        <link rel="stylesheet" href="walkthrough.css">  
    </head>  
  
    <script language="VB" runat=server>  
        Sub SubmitBtn_Click(Sender as Object, E as EventArgs)  
            If (Page.IsValid = true) then  
                Dim MyConnection As New SqlConnection("server=localhost;uid=  
                Dim MyCommand As New SqlCommand("Select ProductID, Pr  
                Dim DS as New DataSet  
                MyCommand.FillDataSet(DS, "Titles")  
  
                MyList.DataSource = DS.Tables("Titles").DefaultView  
                MyList.DataBind()  
  
            End If  
        end sub  
    </script>  
  
    <body>  
        <asp:adrotator AdvertisementFiles="ads.xml" runat=server/>
```

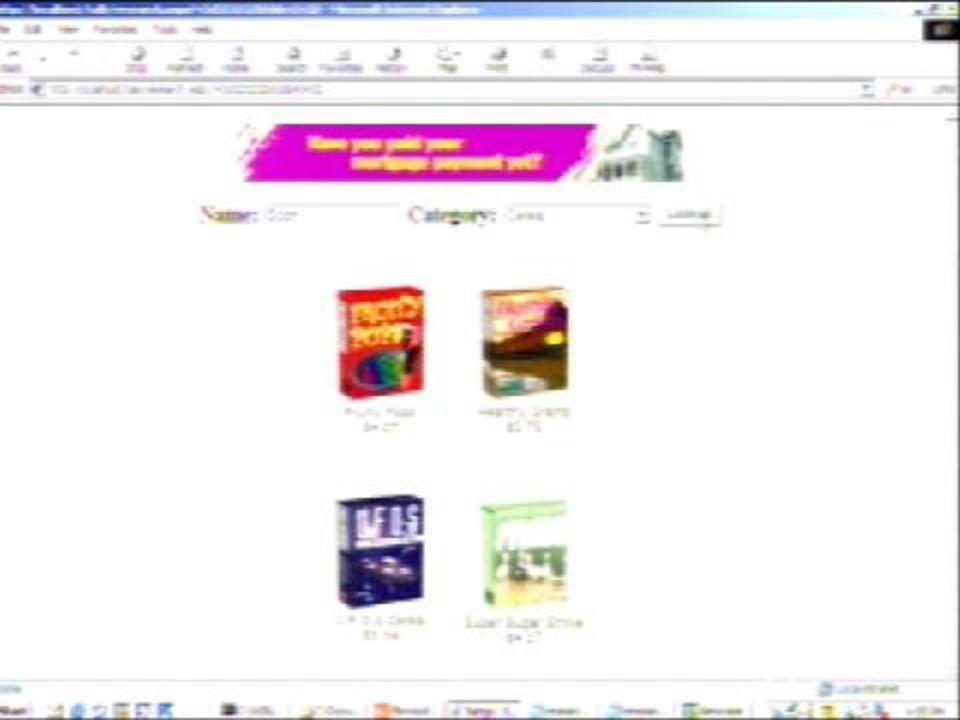












Have you paid your mortgage payment yet?

Name: Goo

Category: Games

Listing



FRODO BAGGS
\$4.99



HARRY POTTER
\$1.75



LEGO
\$1.99



Super Super Drive
\$4.99

```

<@ Import Namespace="System.Data" %>
<@ Import Namespace="System.Data.SqlClient" %>

html>
  <head>
    <link rel="stylesheet" href="walkthrough.css">
  </head>

  <script language="VB" runat=server>

    Sub SubmitBtn_Click(Sender as Object, E as EventArgs)
      If (Page.IsValid = true) then

        Dim MyConnection As New SqlConnection("server=localhost;uid=sa;password=sa;")
        Dim MyCommand As New SqlCommand("Select ProductID, Price, ProductName from Product")
        Dim DS as New DataSet
        MyCommand.Fill(DataSet, "Titles")

        MyList.DataSource = DS.Tables("Titles").DefaultView
        MyList.DataBind()

      End If
    End Sub

  </script>

  <body>

    <asp:adrotator AdvertisementFiles="ads.xml" runat=server/>
  </body>

```

```
        <b><# System.string.format("[0:c]", cont)>
    </td>
</tr>
</template>

<template name="separatortemplate">
    <tr>
        <td colspan=4 height=1 bgcolor="000000"></td>
    </tr>
</template>

<template name="footertemplate">
    <tr>
        <td colspan=4 height=1 bgcolor="000000"></td>
    </tr>
</table>
</template>

</asp:datalist>
```

```

<br>
<asp:RequiredFieldValidator ControlToValidate="Name" Display=
<asp:RequiredFieldValidator ControlToValidate="Category" Display=
```

```

If (Page.IsValid) Then
End If
```

```
Imports System
Imports System.Data
Imports System.Data.SqlClient
Imports System.Web
Imports System.Web.UI
Imports System.Web.UI.WebControls

Public Class Walk
    Inherits Page

    Public MyList As DataList
    Public Category As DropDownList

    Public Sub SubmitBtn_Click(Sender As Object, E As EventArgs)

        If (Page.IsValid)

            Dim MyConnection As New SqlConnection("server=localhost;uid=sa;password=1234567890;")
            Dim MyCommand As New SqlCommand("Select ProductID, ProductName, Price, CategoryID, CategoryName, ProductImage FROM Product")
            Dim DS As New DataSet
            MyCommand.Fill(DataSet, "titles")

            MyList.DataSource = CType(DS.Tables("titles").DefaultView, DataView)
            MyList.DataBind()

        End If

    End Sub

End Class
```

```

@ Page Language="vb" Inherits="walk" %>

<html>
<head>
<link rel="stylesheet" href="walkthrough.css">
</head>
<body>

<asp:adrotator AdvertisementFile="ads.xml" runat=server/>

<form method="post" runat=server>

    <h3> Name: <asp:textbox id="Name" runat=server/>

    Category: <asp:dropdownlist id="Category" runat=server>
        <asp:listitem><!--select Category--></asp:listi
        <asp:listitem value=1>Milk</asp:listitem>
        <asp:listitem value=2>Cereal</asp:listitem>
        <asp:listitem value=3>Soda</asp:listitem>
    </asp:dropdownlist>

    <asp:button text="Lookup" OnClick="SubmitBtn_Click" runat=ser

    <br>
    <asp:requiredfieldvalidator controltovalidate="Name" display=
    <asp:RequiredFieldValidator ControlToValidate="Category" Disp

    <asp:datalist id="MyList" repeatcolumns=2 width=300 height=40
        <template name="itemtemplate">

```


Grocer To Go



Select Category:

Product Category: Milk



Chocolate City Milk

[View To Cart](#)

Serving Size 8 fl. oz. (240 mL)

Servings Per Container 3

Total Fat 1g 20%

Cholesterol 1g 2%

Total 100%



Chocolate City Milk
\$2.00



Brown Brand 2% Milk
\$2.00



Fruit & Pome Milk
\$2.00



Pomegranate Whole Milk
\$2.00

Your Shopping Cart

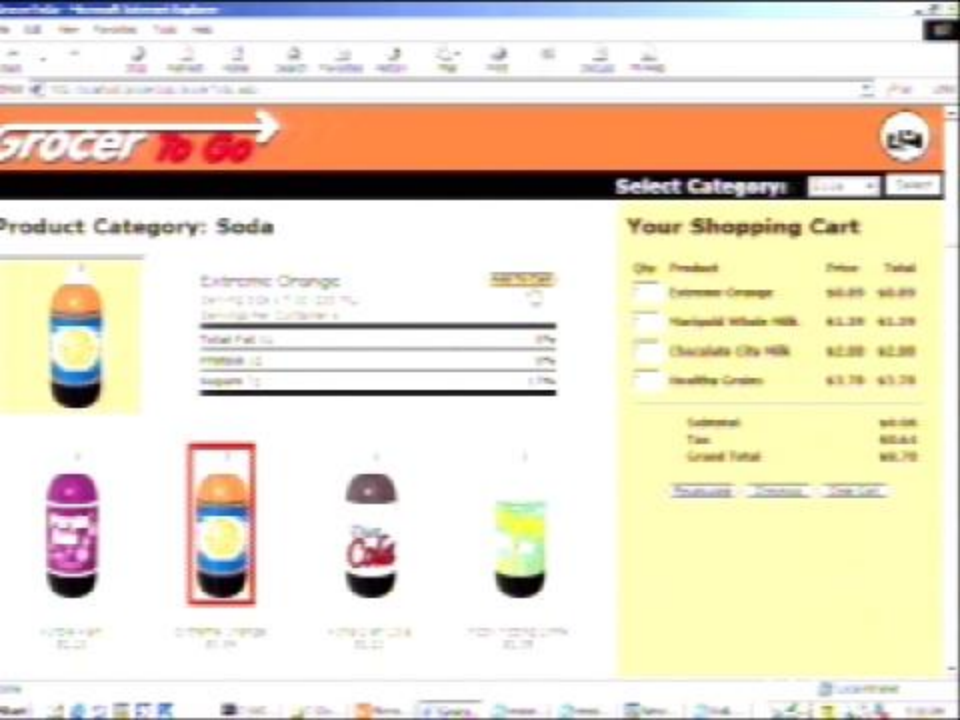
Qty	Product	Price	Total
-----	---------	-------	-------

	Subtotal	\$0.00	\$0.00
--	----------	--------	--------

	Tax	\$0.00	\$0.00
--	-----	--------	--------

	Grand Total	\$0.00	\$0.00
--	-------------	--------	--------

[View Cart](#) [Checkout](#) [Home](#)



Grocer To Go



Select Category:

Product Category: Soda



Extreme Orange

ADD TO CART

Refreshing Orange & Citrus Flavors
Refreshing Orange & Citrus Flavors

Total Price:

0%

Shipping:

0%

Subtotal:

0%



Grape Soda
\$2.99



Extreme Orange
\$2.99



Diet Cola
\$2.99



Diet Orange Soda
\$2.99

Your Shopping Cart

Qty	Product	Price	Total
<input type="checkbox"/>	Extreme Orange	\$2.99	\$2.99
<input type="checkbox"/>	Marigold White Milk	\$1.99	\$1.99
<input type="checkbox"/>	Chocolate City Milk	\$2.99	\$2.99
<input type="checkbox"/>	Healthy Green	\$1.99	\$1.99

Subtotal	\$9.96
Tax	\$0.00
Grand Total	\$9.96

[Shopping](#) [Home](#) [Contact](#)

```

<@ Import Namespace="System.Data" %>
<@ Import Namespace="Market" %>

html>
head>
<title>GroceryGo</title>
<link rel="stylesheet" href="grocerstyle.css">

<style>
    div.details { background-color:ffffcc; padding-top:15; padding-t
    div.details table { width:375; }
    div.details table td { font-family:Verdana; font-size:8pt; }
</style>

<script language="c#" runat=server>

    public void Page_Load(Object sender, EventArgs e) {
        if (!Page.IsPostBack) {
            ProductListing.SelectedIndex = 0;
            UpdateProducts();
            UpdateShoppingCart();
        }
    }

    public void CategoryList_Select(Object sender, EventArgs e) {
        CurrentCategory.Text = CategoryList.Items[CategoryList.Select
        UpdateProducts();
    }

```

```
</style>
```

```
<script language="C#" runat="server">
```

```
    public void Page_Load(Object sender, EventArgs e) {
```

```
        if (!Page.IsPostBack) {
```

```
            ProductListing.SelectedIndex = 0;
```

```
            UpdateProducts();
```

```
            UpdateShoppingCart();
```

```
        }
```

```
    }
```

```
    public void CategoryList_Select(Object sender, EventArgs e) {
```

```
        CurrentCategory.Text = CategoryList.Items[CategoryList.Select
```

```
        UpdateProducts();
```

```
    }
```

```
    public void ProductListing_Select(Object sender, EventArgs e) {
```

```
        UpdateProducts();
```

```
    }
```

```
    public void AddBtn_Click(Object sender, ImageClickEventArgs e) {
```

```
        int productID = Int32.Parse(ProductListing.DataKeys[ProductLi
```

```
        InventoryDB market = new InventoryDB();
```

```
        DataRow product = market.GetProduct(productID);
```

```

// Iterate over items in shopping cart (update cart with current
for (int i=0; i<shoppingCartList.Items.Count; i++) {
    HtmlInputText qty = (HtmlInputText) ShoppingCartList.Items
    shoppingCart[(String) ShoppingCartList.DataKeys[i]].Quantity
}
UpdateShoppingCart();
}

public void ClearCart_Click(Object sender, ImageClickEventArgs e)
{
    // Obtain access to Shopping Cart From Session State
    Market.OrderList shoppingCart = ((Market.OrderList) Session[
    // Clear Items From Shopping Cart and then Update UI
    shoppingCart.ClearCart();
    UpdateShoppingCart();
}

void update#products() {
    inventoryos market = new inventoryos();

    // update Product Listing at bottom of page

    int categoryID = Int32.Parse(CategoryList.Items[CategoryList.
    ProductListing.DataSource = market.GetProducts(categoryID).De
    ProductListing.DataBind();
}

```

Grocer To Go



Select Category:

Product Category: Soda



Exotic Orange

ADD TO CART

Refreshing Soda with 100% Natural Flavors
Available in 12 oz and 24 oz cans

Total Price	\$1.99
Tax	\$0.00
Subtotal	\$1.99



Purple Soda
\$1.99



Exotic Orange
\$1.99



Dark Soda
\$1.99



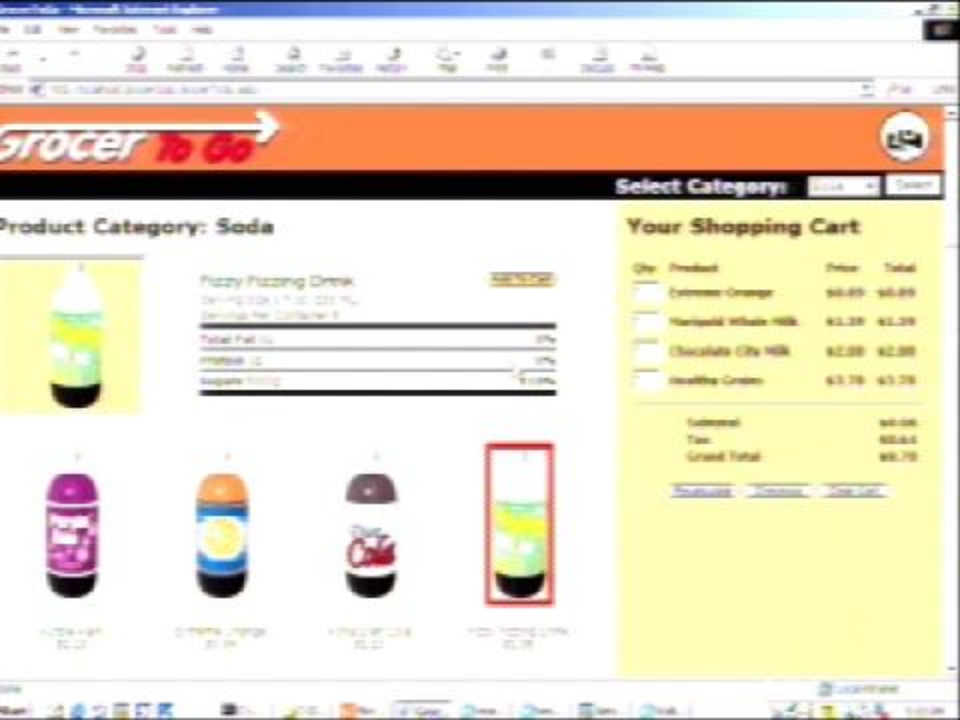
Green Soda
\$1.99

Your Shopping Cart

Qty	Product	Price	Total
1	Exotic Orange	\$1.99	\$1.99
1	Mountain Dew	\$1.99	\$1.99
1	Chocoballs (12 oz)	\$1.99	\$1.99
1	Healthy Choice	\$1.99	\$1.99

Subtotal	\$7.96
Tax	\$0.00
Grand Total	\$7.96

[View Cart](#) [Checkout](#) [Home](#)



Grocer To Go



Select Category:

Product Category: Soda



Fizzy Popping Drink

[Add to Cart](#)

Serving Size: 12 fl. oz. (355 mL)
Serving Per Container: 1

Total Fat 10g	10%
Protein 10g	10%
Sugars 100g	100%



Fruit Punch
\$1.99



Orange Lemonade
\$1.99



Fruit Punch
\$1.99



Fizzy Popping Drink
\$1.99

Your Shopping Cart

Qty	Product	Price	Total
<input type="checkbox"/>	Extreme Orange	\$6.99	\$6.99
<input type="checkbox"/>	Marigold White Milk	\$1.29	\$1.29
<input type="checkbox"/>	Chocolate City Milk	\$2.99	\$2.99
<input type="checkbox"/>	Healthy Grains	\$1.79	\$1.79

Subtotal	\$12.06
Tax	\$0.64
Grand Total	\$12.70

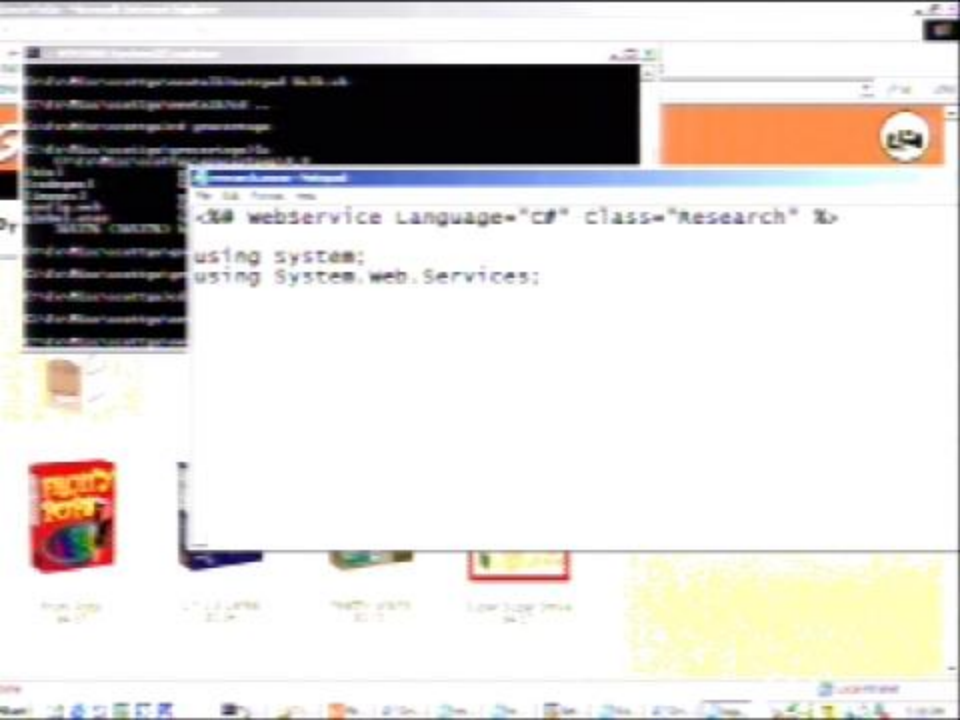
[Shopping](#) [Checkout](#) [My Cart](#)

ASP+ Web Services (1 of 2)

- Goal: Make it dramatically easier to expose programmatic services on the web
- Simple Programming Model to Understand
 - Author .ASMX Files with Class Methods
 - Incoming Http Messages mapped to methods
 - No special HTTP or XML knowledge required
- Supports Multiple Message Wire Formats
 - Http Get Requests that return XML Payloads
 - Http Post Requests that return XML Payloads
 - Http SOAP Requests with XML Payloads

ASP+ Web Services (1 of 2)

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- Supports Multiple Message Wire Formats
 - Http Get Requests that return XML Payloads
 - Http Post Requests that return XML Payloads
 - Http SOAP Requests with XML Payloads



```
<?xml webService Language="c#" class="Research" ?>  
using System;  
using System.Web.Services;
```

```
<% webservice Language="c#" class="Research" %>
using system;
using System.Web.Services;
public class Research {
    public int A
```

```
<% webservice Language="c#" class="Research" %>

using system;
using System.Web.Services;

public class Research {

    public int Add(int num1, int num2) {
        return num1+num2;
    }
}
```




Research WebService

The Research WebService exposes the following web methods:

- `add`
- `get`

For a complete list, reference the Research WebService's class file: `ResearchWebService.java`

Web Method Reference

Add Web Method

No additional reference information about the add web method is available at this time.

Request parameters:

- `name`
- `num`

Response type:

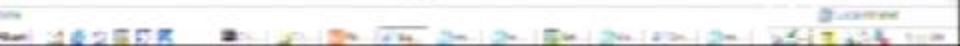
- `int`

Breaker Use Add Web Method

Enter parameter values and then click the Invoke button to invoke the add web method.

Parameter:	<input type="text" value="value"/>
name:	<input type="text"/>
num:	<input type="text"/>

Invoke

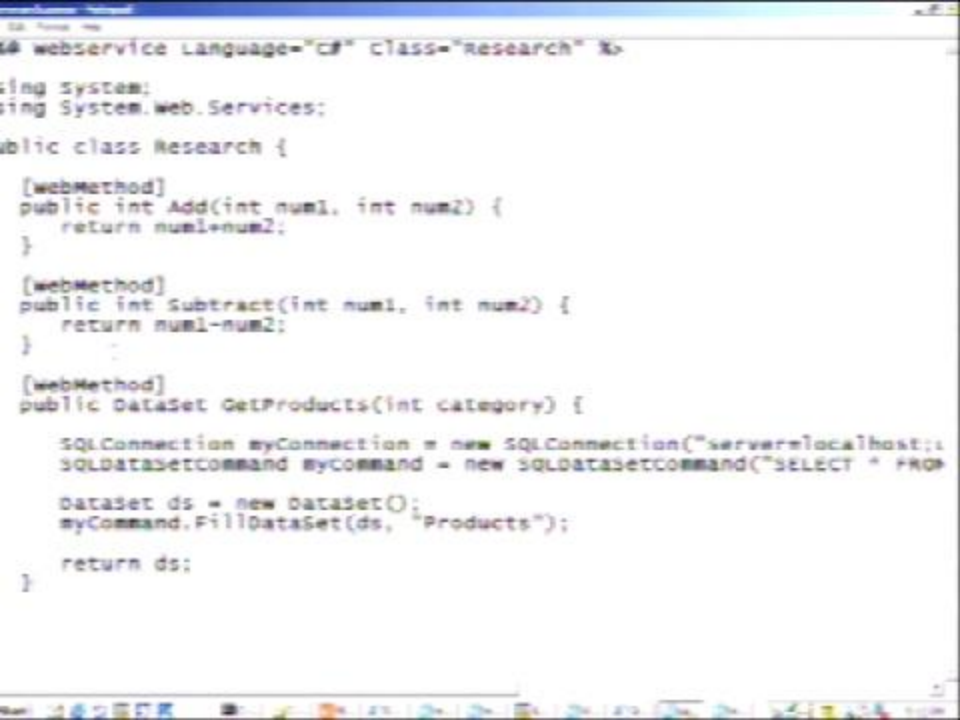



```
<?xml version="1.0" ?>
<int>49</int>
```

1994

1000

100



```

@ webservice Language="C#" class="Research" %>
using System;
using System.Data;
using System.Web.Services;

public class Research {

    [webMethod]
    public int Add(int num1, int num2) {
        return num1+num2;
    }

    [webMethod]
    public int Subtract(int num1, int num2) {
        return num1-num2;
    }

    [webMethod]
    public DataSet GetProducts(int category) {

        SqlConnection myConnection = new SqlConnection("server=localhost;
        SQLDataSetCommand myCommand = new SQLDataSetCommand("select * from

        dataset ds = new dataset();
        myCommand.FillDataSet(ds, "Products");

        return ds;
    }
}

```

```
using System;
using System.Data;
using System.Data.SqlClient;
using System.Web.Services;

[WebService(Language="C#", Class="research")]
public class Research {

    [WebMethod]
    public int Add(int num1, int num2) {
        return num1+num2;
    }

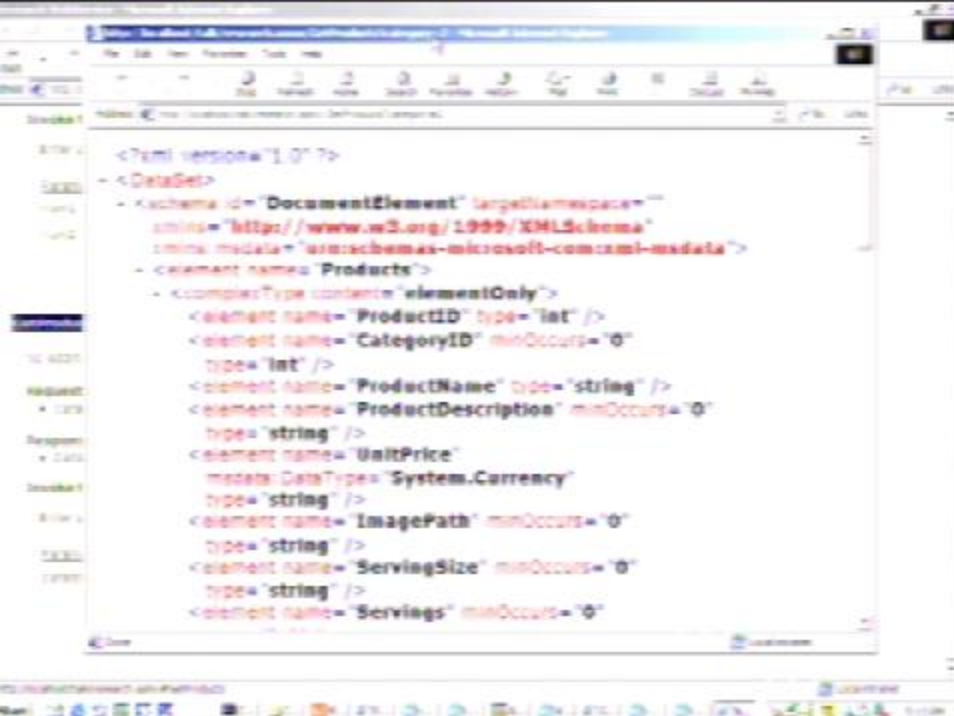
    [WebMethod]
    public int Subtract(int num1, int num2) {
        return num1-num2;
    }

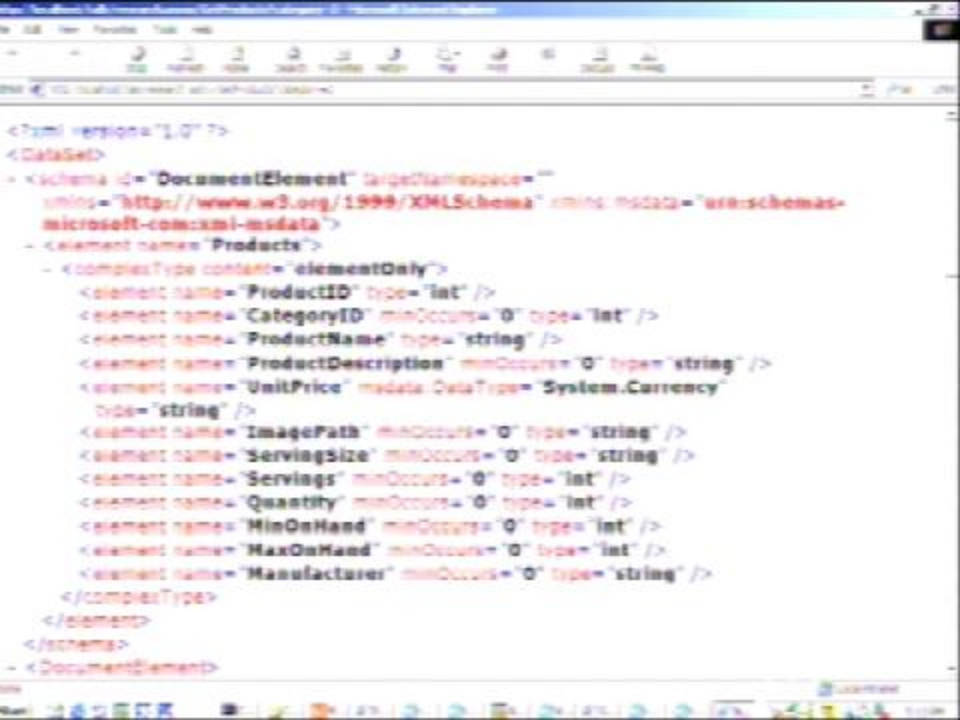
    [WebMethod]
    public DataSet GetProducts(int category) {

        SqlConnection myConnection = new SqlConnection("server=localhost;
        SqlDataAdapter myCommand = new SqlDataAdapter("select * from

        DataSet ds = new DataSet();
        myCommand.FillDataSet(ds, "Products");

        return ds;
    }
}
```





using System.Xml.Serialization;

public class Order {

public int OrderID;
public string Description;

public class Research {

[WebMethod]
public int Add(int num1, int num2) {
return num1+num2;
}

[WebMethod]
public int subtract(int num1, int num2) {
return num1-num2;
}

[WebMethod]
public DataSet GetProducts(int category) {
SQLConnection myConnection = new SQLConnection("server=localhost;
SQLDataSetCommand myCommand = new SQLDataSetCommand("SELECT * FROM
DataSet ds = new DataSet();
myCommand.FillDataSet(ds, "Products");
return ds;
}

```
using System.Xml.Serialization;
```

```
public class Order {
```

```
    public int    OrderID;  
    public string Description;
```

```
public class Research {
```

```
    [WebMethod]
```

```
    public Order GetOrder(int orderId) {
```

```
        Order myOrder = new Order();
```

```
        myOrder.OrderID = orderId;  
        myOrder.Description = "Some description";
```

```
        return myOrder;
```

```
}
```

```
[WebMethod]
```

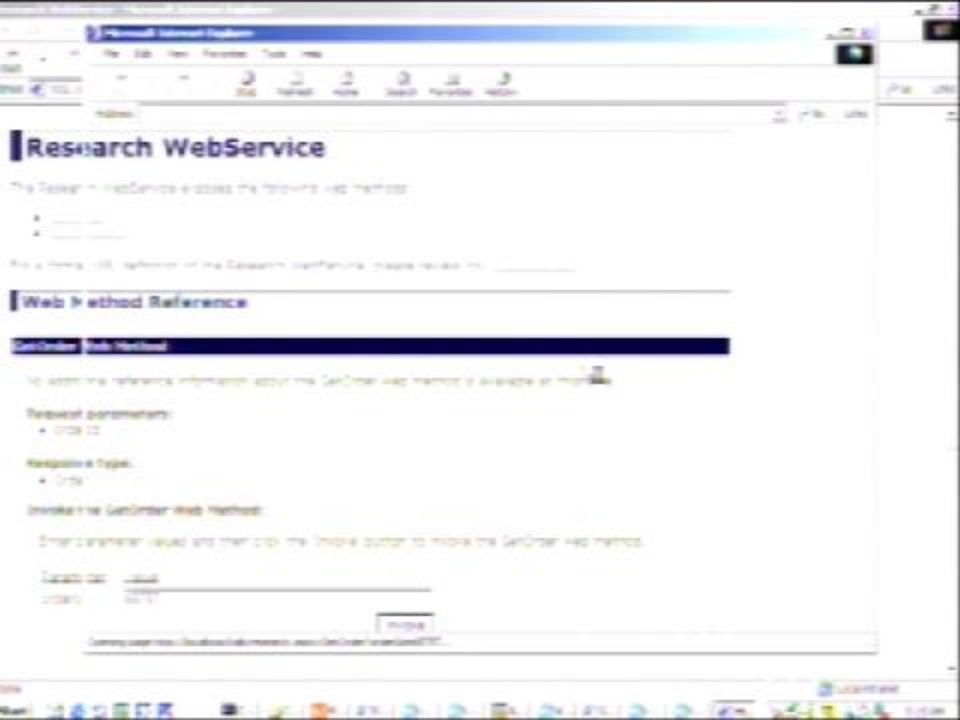
```
public DataSet GetProducts(int category) {
```

```
    SqlConnection myConnection = new SqlConnection("server=localhost;  
    SqlDataAdapter myCommand = new SqlDataAdapter("SELECT * FROM
```

```
    DataSet ds = new DataSet();  
    myCommand.FillDataSet(ds, "Products");
```

```
    return ds;
```

```
}
```

Research WebService

The Research WebService exposes the following Web methods:

- [GetOrder](#)
- [GetOrderDetails](#)

For a full list of references, refer to the [ResearchWebService](#) WSDL located at: <http://localhost:8080/ResearchWebService/GetOrder.wsdl>

Web Method Reference

Method Name	Description
-------------	-------------

For more information about the [GetOrder](#) Web method, click the [GetOrder](#) link.

Request parameters:

- [OrderID](#)

Response type:

- [Order](#)

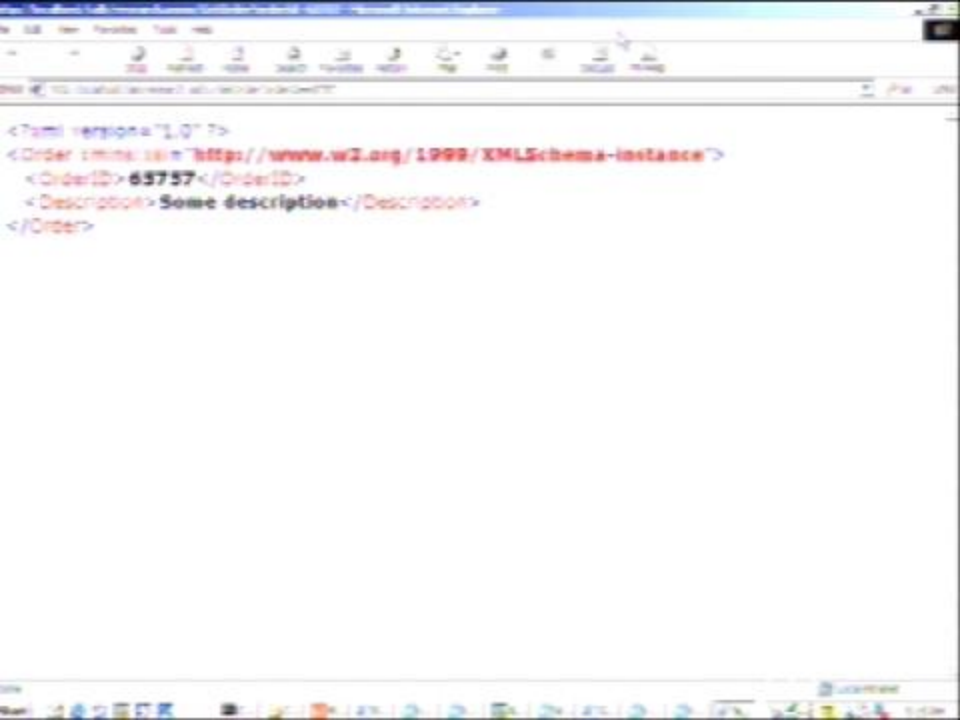
Invoke the [GetOrder](#) Web Method:

Enter parameter values and then click the [Invoke](#) button to invoke the [GetOrder](#) Web method.

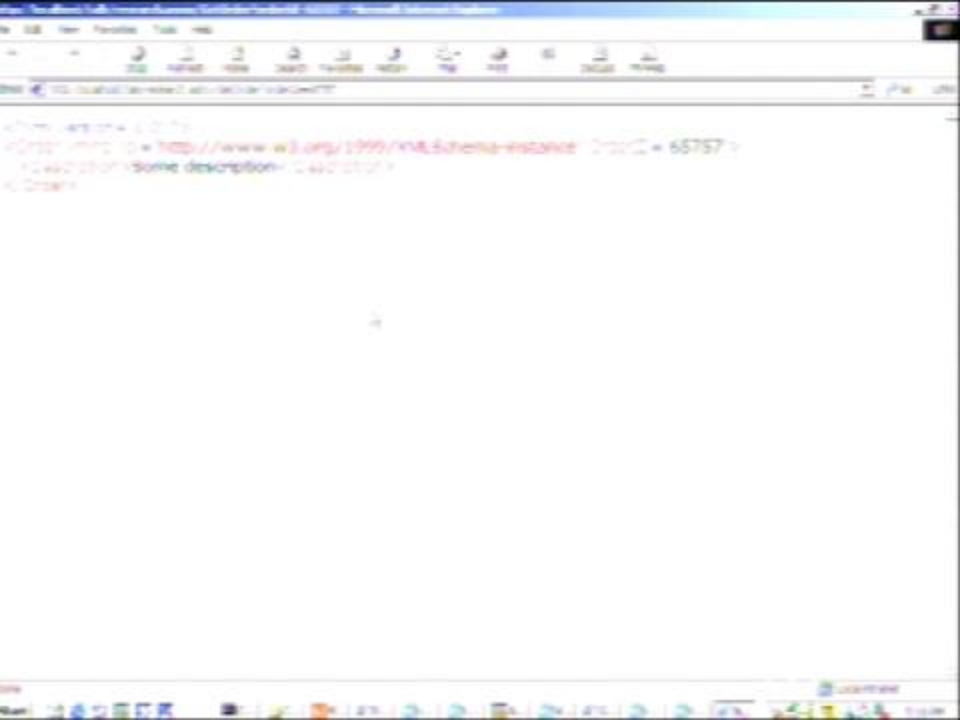
Parameter:	<input type="text" value="12345"/>
OrderID:	<input type="text" value="12345"/>

[Invoke](#)

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```
<?xml version="1.0" ?>
<Order <mini:isn="https://www.w3.org/1999/XMLSchema-instance">
  <OrderID> 65757 </OrderID>
  <Description> Some description </Description>
</Order>
```



```
using System.Data;
using System.Data.Sql;
using System.Web.Services;
using System.Xml.Serialization;

public class Order {

    [XmlAttribute("ResearchID")]
    public int OrderID;
    public string Description;

}

public class Research {

    [webmethod]
    public Order GetOrder(int orderId) {

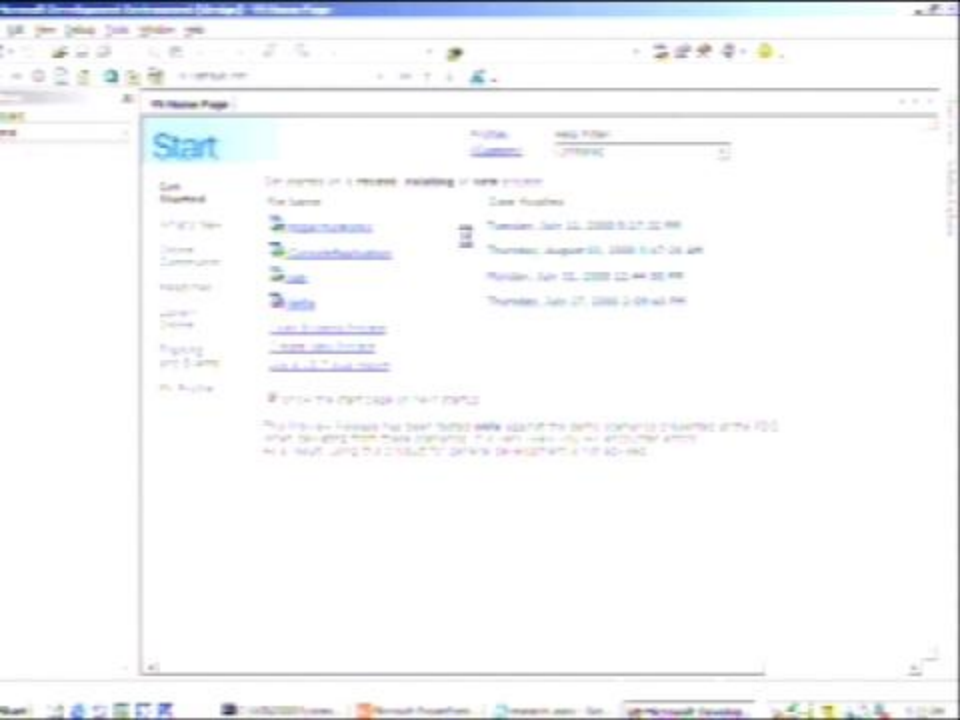
        Order myOrder = new Order();

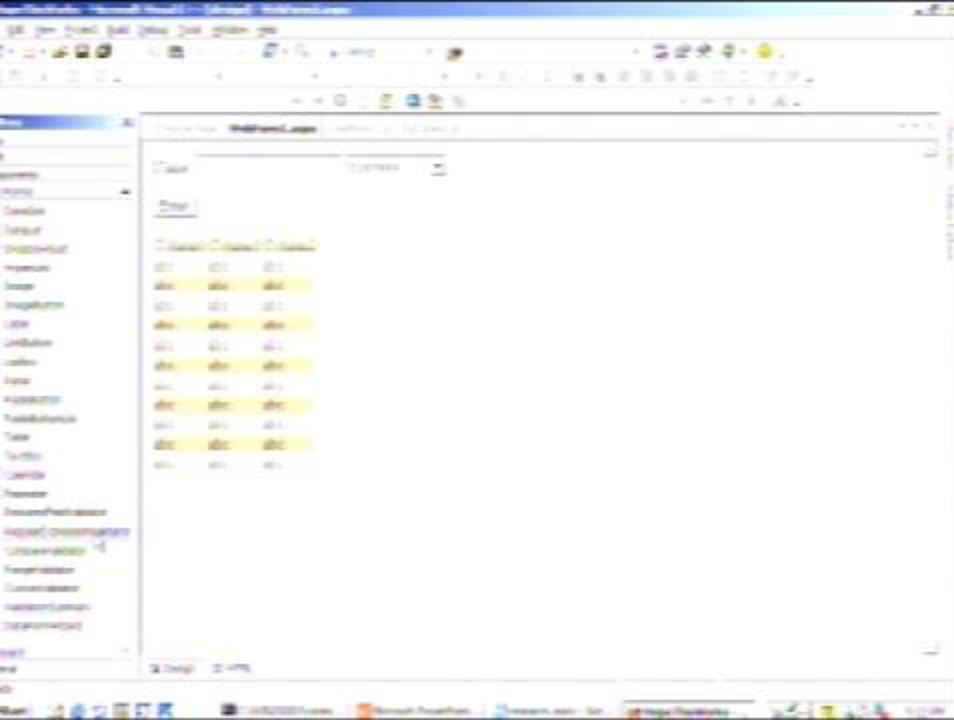
        myOrder.OrderID = orderId;
        myOrder.Description = "Some description";

        return myOrder;
    }

    [webMethod]
    public DataSet GetProducts(int category) {

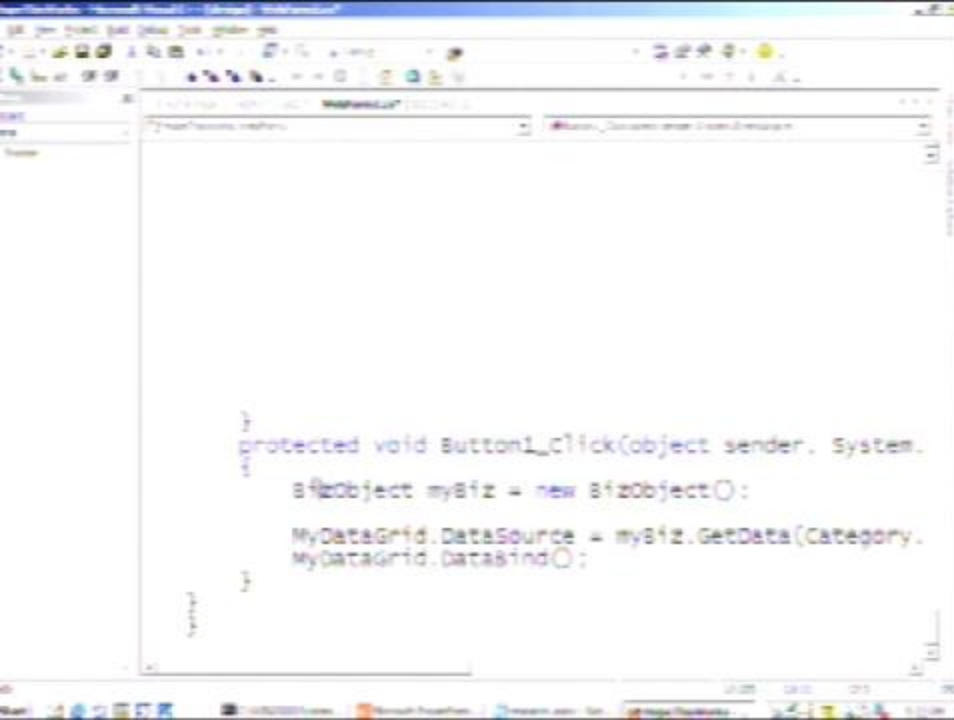
        SqlConnection myConnection = new SqlConnection("server=localhost;
        SqlDataAdapter myCommand = new SqlDataAdapter("SELECT * FROM
        DataSet ds = new DataSet();
```

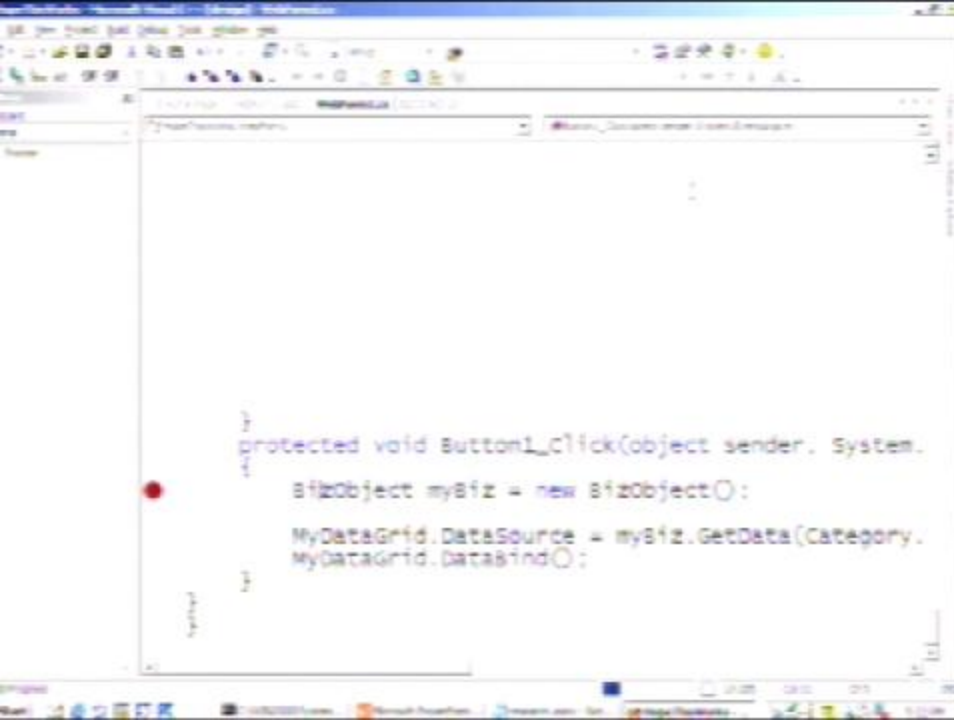



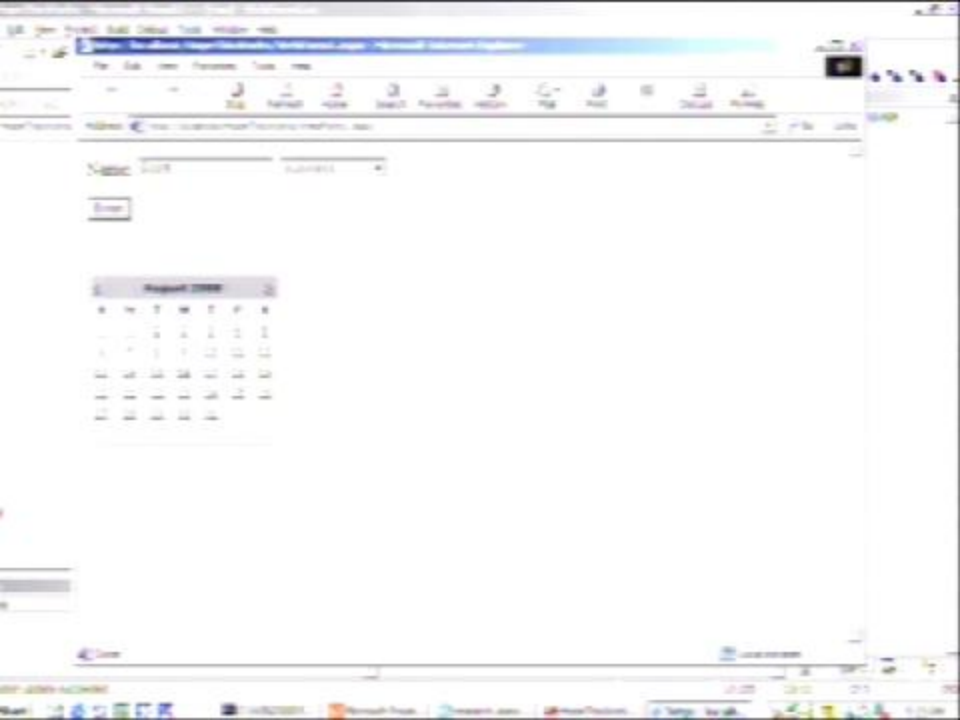


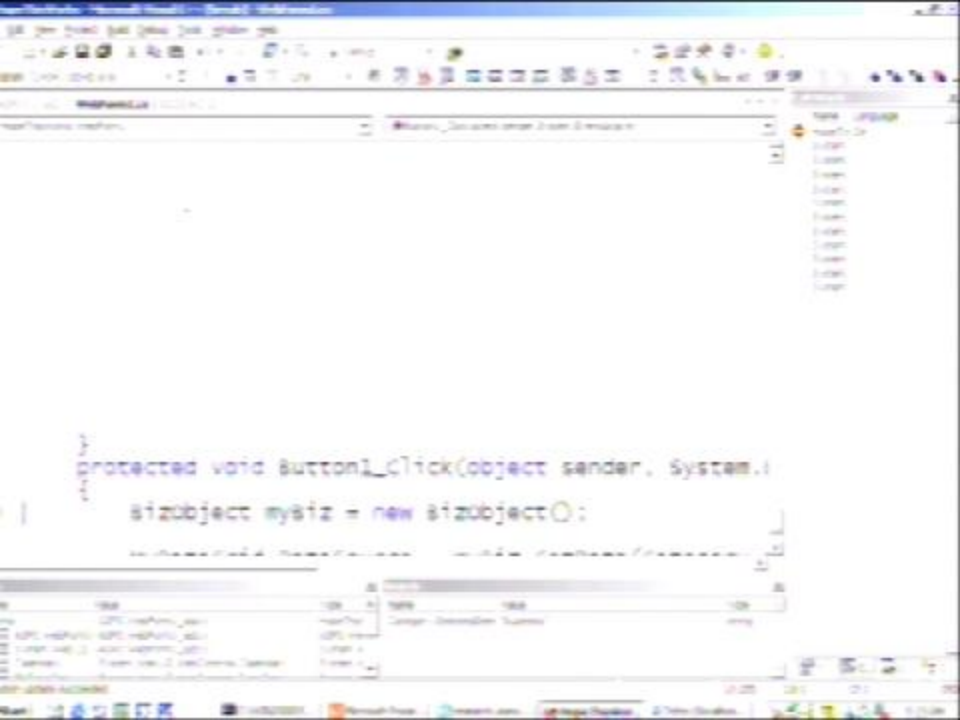
The screenshot shows a Google Sheets interface. The main area contains a 10x10 grid of cells. The cells with row indices 1, 3, 5, 7, and 9 (assuming the first row is index 0) contain the text 'abc'. The cells with column indices 1, 3, 5, 7, and 9 contain the text 'abc'. All other cells are empty. The grid is visually represented as a 10x10 array of cells, with the text 'abc' appearing in a pattern that suggests a 5x5 grid of blocks, each block being 2x2 cells.

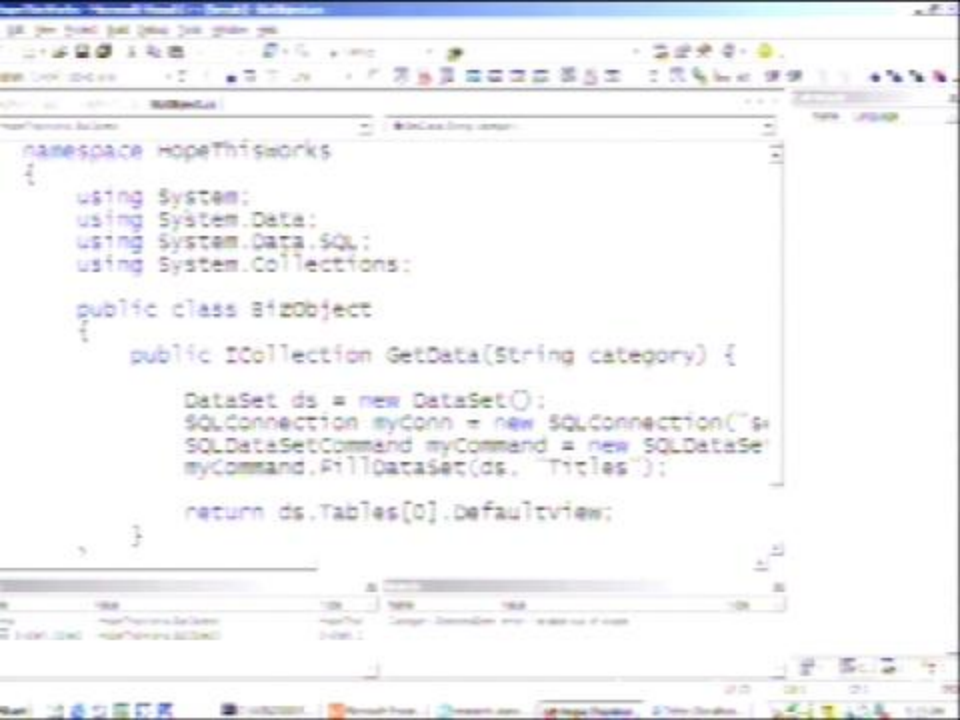
At the bottom of the spreadsheet, there is a calendar for August 1999. The calendar shows the days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) and the dates (1 through 31). The calendar is displayed in a standard format with the days of the week as headers and the dates as rows.

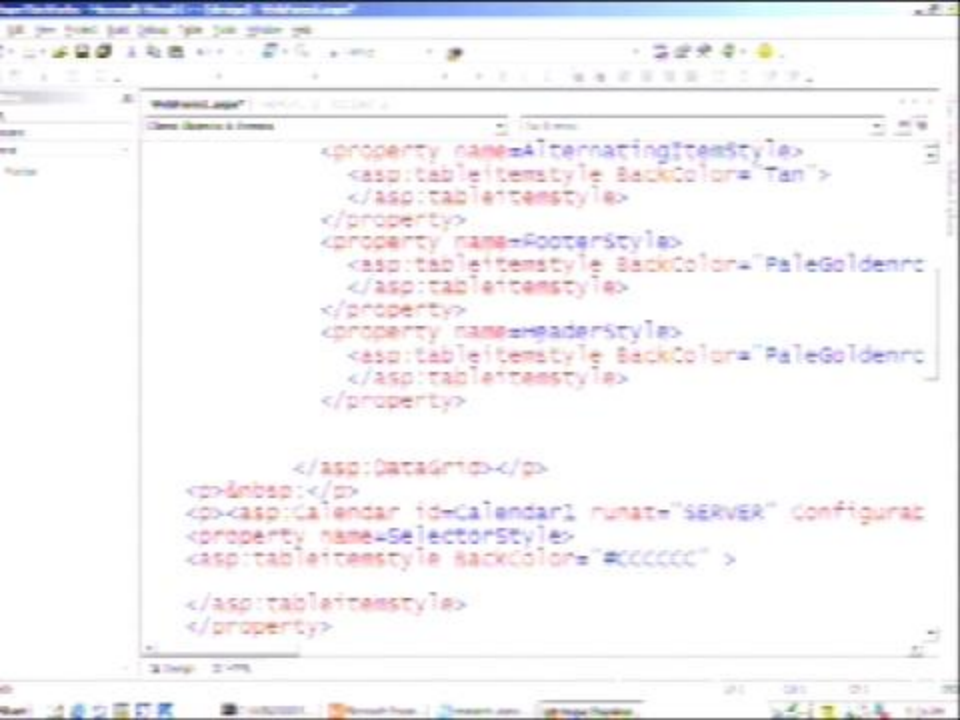












The background of the slide is a vibrant blue. On the left side, there is a stylized, glowing globe with a grid of latitude and longitude lines. A network of thin, white lines, resembling a web or a data network, is overlaid on the globe and extends across the upper left portion of the slide. The overall aesthetic is high-tech and digital.

ASP+ Web Services Demos

ASP+ Web App Infrastructure

- Pages/Services Share Single App Model
 - Session & Application State
 - Configuration and Administration
 - Code Deployment
 - Security Model
- Key ASP+ Improvements
 - Improved Deployment
 - Improved Scalability
 - Improved Security
 - Improved Reliability
 - Improved Factorability

ASP+ Deployment

- Goal: Enable a web app to be deployed simply by copying its bits to the server
- No-nonsense architecture
 - No admin or registration utilities required
 - No local server access required
 - No web server restarts required
- Must work for all web app resources
 - Web Pages/ Web Services
 - Compiled Components
 - Configuration Metadata

Improved Code Deployment

- Simple deployment for components
 - Just xcopy/ftp to an application's "\bin" dir
 - No registration required (no more regsvr32)
- Each web app is isolated from other apps
 - Components can be private to application
 - Other apps cannot load private components
 - Other apps can use different versions
- Simple uninstall — just delete directory tree
 - No registry entries to clean up

Dynamic Code Update

- Components can be dynamically updated
 - No more locked DLLs
- Just copy new DLL on top of old one
 - App automatically detects changes
 - App gracefully migrates to new version
- No tools, no configuration changes, no app shutdown, no re-boots
 - It just works...

Improved Configuration

- Goal: Provide *extensible* configuration for *admins & developers* to *hierarchically* apply settings for an *application*
- Configuration data stored in XML text files
 - Format is human-readable and human-writable
- Config data can be stored in app directories
 - Config system automatically detects changes
- Developers can build custom config handlers
 - Participate in hierarchical computation of configuration settings for each unique URL

Sample Configuration File

```
<configuration>
```

```
  <httphandlers>
```

```
    <add path="*.aspx" type="PageFactory"/>
```

```
    <add path="Default.aspx" type="StartPage"/>
```

```
  </httphandlers>
```

```
  <adrotator server="http://myadserver:8080">
```

```
    <randomads>
```

```
      <add src="foo.gif" id="12432342"/>
```

```
      <add src="bar.gif" id="45435353"/>
```

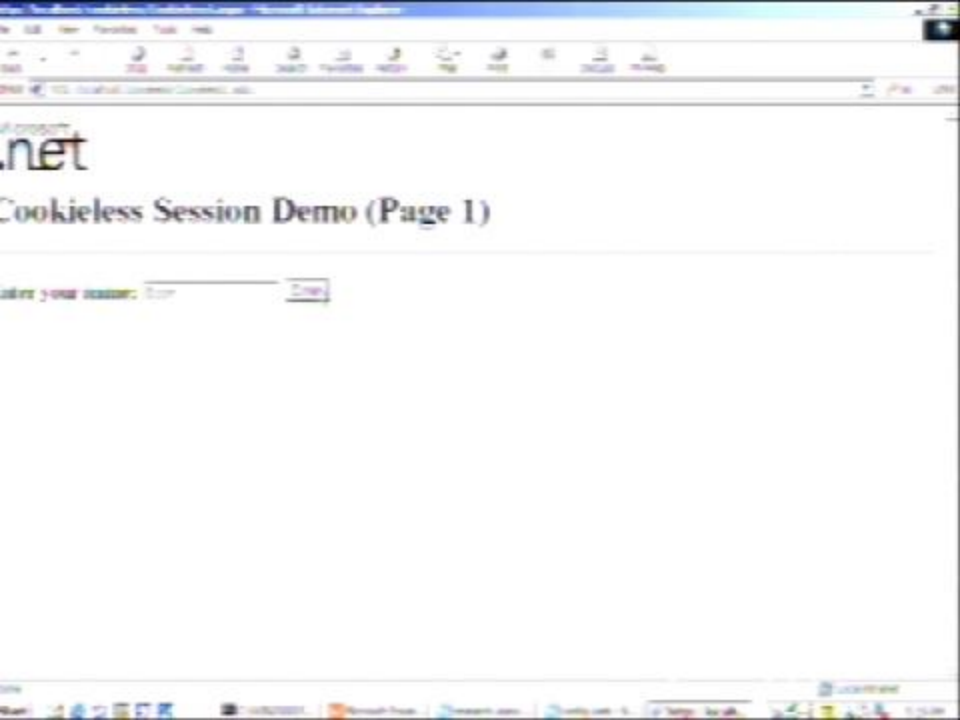
```
    </randomads>
```

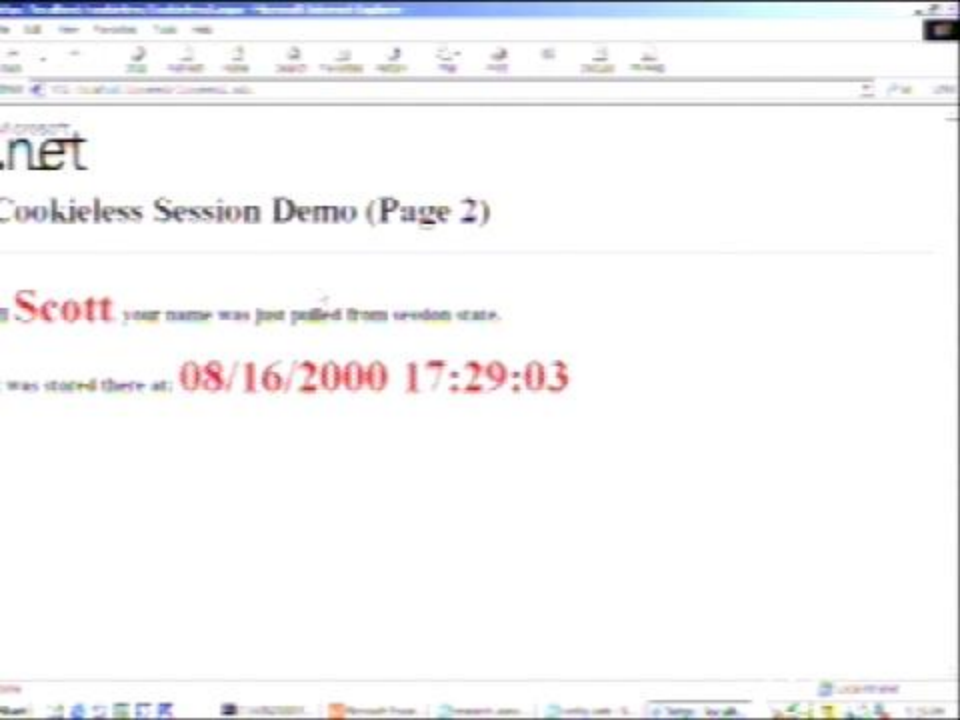
```
  </adrotator>
```

```
</configuration>
```

Year	Country	Population (millions)	Urban population (millions)	Urban population (%)
1990	China	1,192	310	26
1990	India	854	150	18
1990	United States	250	190	76
1990	Japan	123	100	81
1990	Germany	61	50	82
1990	France	59	45	76
1990	United Kingdom	56	45	80
1990	Italy	56	40	71
1990	Spain	40	25	62
1990	Sweden	9	8	90
1990	Norway	4	3	75
1990	Denmark	5	4	80
1990	Finland	5	4	80
1990	Switzerland	7	6	86
1990	Austria	8	7	88
1990	Netherlands	16	15	94
1990	Belgium	10	9	90
1990	Luxembourg	2	2	100
1990	Portugal	10	6	60
1990	Greece	11	5	45
1990	Turkey	55	15	27
1990	Iran	55	10	18
1990	South Korea	40	25	62
1990	South Africa	25	15	60
1990	Israel	5	4	80
1990	Poland	35	25	71
1990	Czech Republic	12	10	83
1990	Slovak Republic	5	4	80
1990	Hungary	10	8	80
1990	Romania	22	15	68
1990	Bulgaria	8	6	75
1990	Yugoslavia	20	15	75
1990	Croatia	4	3	75
1990	Slovenia	2	1	50
1990	Serbia	10	8	80
1990	Bosnia and Herzegovina	4	3	75
1990	Montenegro	1	1	100
1990	Albania	4	3	75
1990	Greece	11	5	45
1990	Turkey	55	15	27
1990	Iran	55	10	18
1990	South Korea	40	25	62
1990	South Africa	25	15	60
1990	Israel	5	4	80
1990	Poland	35	25	71
1990	Czech Republic	12	10	83
1990	Slovak Republic	5	4	80
1990	Hungary	10	8	80
1990	Romania	22	15	68
1990	Bulgaria	8	6	75
1990	Yugoslavia	20	15	75
1990	Croatia	4	3	75
1990	Slovenia	2	1	50
1990	Serbia	10	8	80
1990	Bosnia and Herzegovina	4	3	75
1990	Montenegro	1	1	100
1990	Albania	4	3	75

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group (CG) and the experimental group (EG). The CG was divided into two subgroups: the control group (CG) and the control group (CG). The EG was divided into two subgroups: the experimental group (EG) and the experimental group (EG). The subjects were divided into two groups: the control group (CG) and the experimental group (EG). The CG was divided into two subgroups: the control group (CG) and the control group (CG). The EG was divided into two subgroups: the experimental group (EG) and the experimental group (EG).





Web Farm Scalability

- Session State can now be shared across a web farm of ASP+ Servers
- Applications no longer tied to one machine
- Loss of front-end web server will cause no interruption in end-user's application experience



External Session State Demo (Page 2)

Hi **Scott**, your name was just pulled from session state.

It was stored there at: **08/16/2000 17:31:29.**

This worker process ID: **1500**





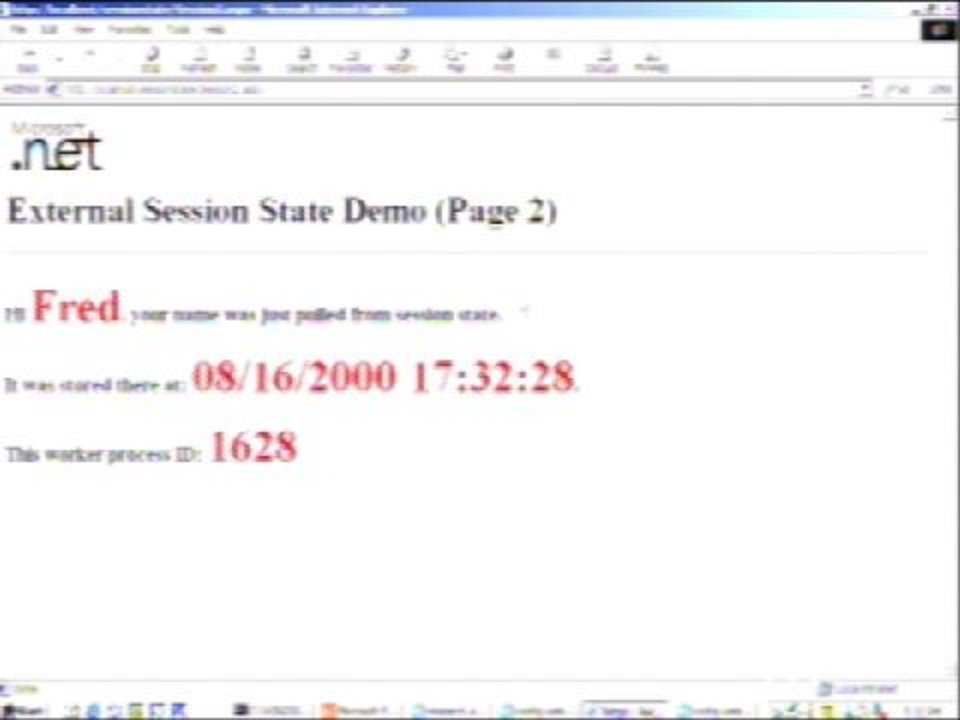
External Session State Demo (Page 2)

III. your name was just pulled from session state.

It was stored there at: .

This worker process ID: **1628**



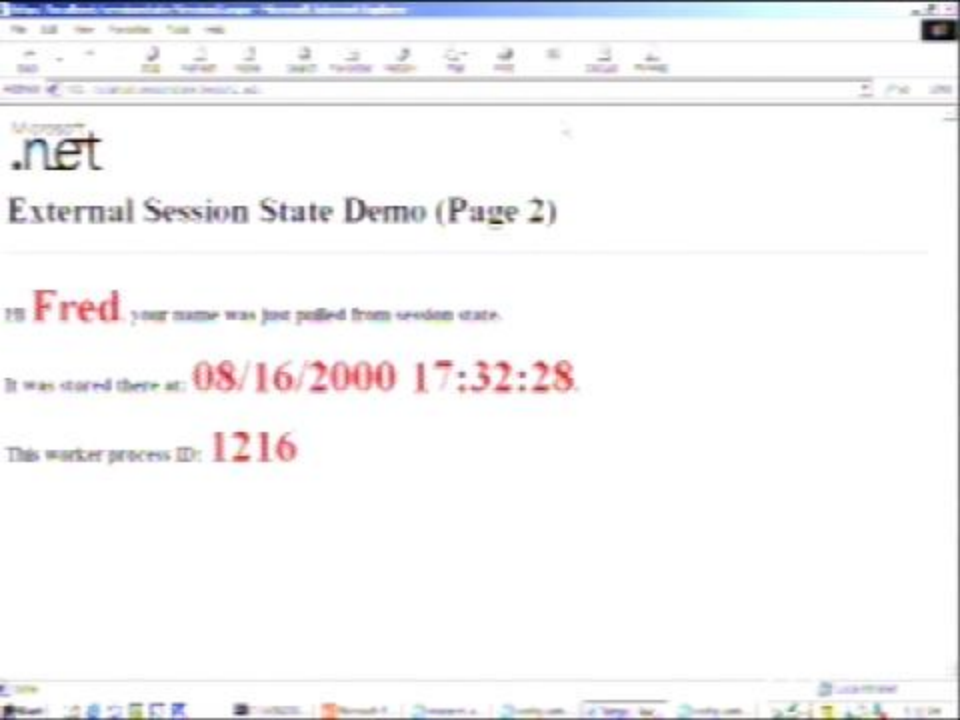


External Session State Demo (Page 2)

Fred, your name was just pulled from session state.

It was stored there at: **08/16/2000 17:32:28.**

This worker process ID: **1628**



External Session State Demo (Page 2)

Fred, your name was just pulled from session state.

It was stored there at: **08/16/2000 17:32:28**.

This worker process ID: **1216**

Caching Support

- Goal: Provide built-in functionality that enables re-use of past work
- Output Cache
 - Full page output cache
 - Vary by params, language, user-agent
- Fragment Cache
 - Enables portions of pages to be cached
- Cache Engine: Extensible Cache API
 - Enables arbitrary objects to be cached



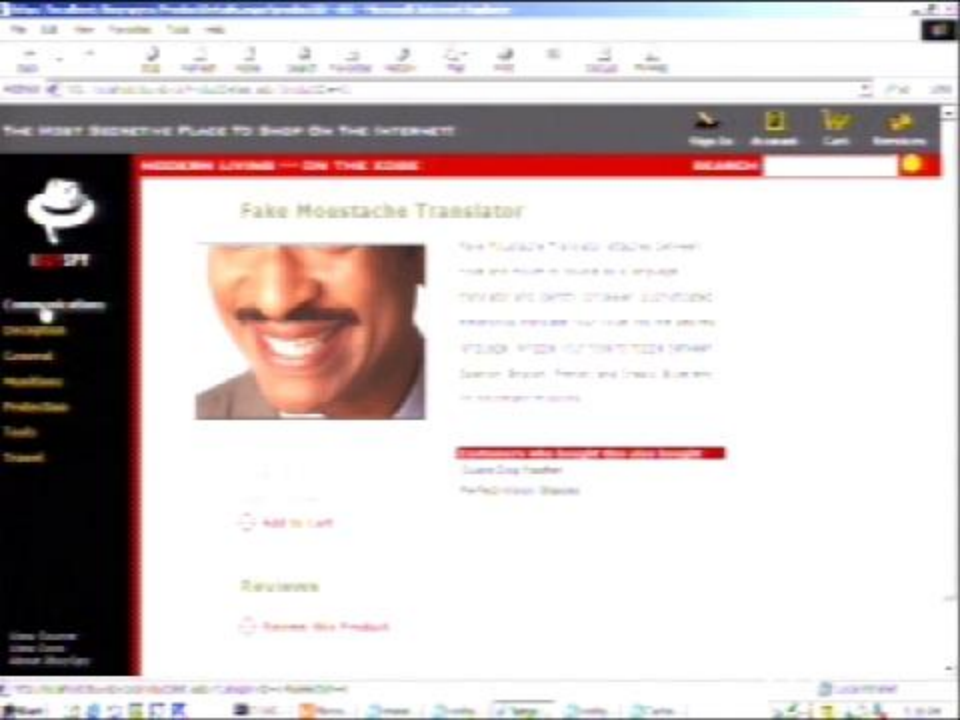
This time is now: 08/16/2000 17:34:58

This time is now: 08/16/2000 17:35:07

localhost.aspx - Notepad

File Edit Format Help

```
<html>
  <body>
    <h1>This time is now: <%=Now%>
  </body>
</html>
```



Caching Support

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Authentication

- **Basic, Digest and NTLM Authentication**
 - ASP+ leverages IIS to provide basic, digest and NTLM authentication support
 - Credential verification against NT SAM or DS
- **Passport Authentication**
 - ASP+ will support passport out of the box (managed passport profile API)
- **Custom Forms Based Authentication**
 - ASP+ enables super-easy forms based authentication w/ cookie token tracking
 - Enables custom login screen (no popup dialogs)
 - Enables custom credential checks (against database, exchange, etc)

Authorization

- In addition to authenticating users, ASP+ supports higher-level app *roles*
 - Example: "User", "Manager", "VP"
 - Provide nice developer/admin separation
- Developers can authorize URL access using either users or roles
- Developers can perform runtime role checks in code
 - `if (User.IsInRole("Manager")) { }`

Authorization

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- Developers can perform runtime role checks in code
 - `if (User.IsInRole("Manager")) { }`

Code Execution

- ASP+ optionally supports NT based request impersonation
 - Execute requests in the context of a Windows identity ("Redmond\401kApp")
- ASP+ also supports code access permission-sets
 - Sandbox on the server
 - Restrict application access to resources
 - Enables great application hosting support

Improved Reliability

- ASP+ has been designed with assumption that failures will occur on systems
 - Designing for failure reduced fragility
- ASP+ detects and recovers from problems
 - Access Violations, Memory Leaks, Deadlocks
- ASP+ supports pre-emptive cycling of apps
 - Time and Request Based Settings
- Net Result: Users should never think that an ASP+ application is down or unavailable

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Factorability

Http Runtime

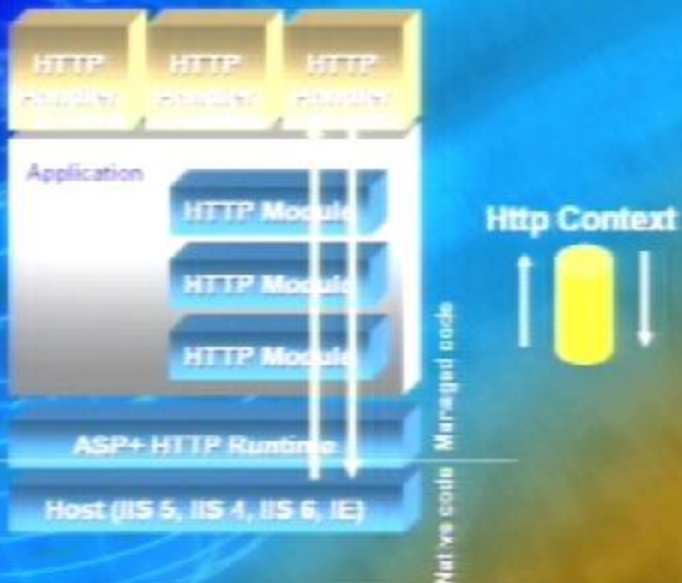
- **Goal: Factored Low-Level Design**
 - Replacement for ISAPI Extension and Filters
- **Provide customers with the ability to replace/customize/extend the core product**
 - Eliminate “black box” magic with ASP/IIS
 - Support other programming abstractions
- **Run on top of multiple “host” environments**
 - IIS5, IIS4, IE

ASP+ HTTP Runtime



Native code Managed code

ASP+ HTTP Runtime



Request Interception Events

- Per Request Events (in order):

Request Interception Events

- Per Request Events (in order):
 - Application_BeginRequest
 - Application_AuthenticateRequest
 - Application_AuthorizeRequest
 - Application_ResolveRequestCache

Request Interception Events

- Per Request Events (in order):
 - Application_BeginRequest
 - Application_AuthenticateRequest
 - Application_AuthorizeRequest
 - Application_ResolveRequestCache
 - Application_AcquireRequestState
 - Application_PreRequestHandlerExecute
 - Application_PostRequestHandlerExecute
 - Application_ReleaseRequestState
 - Application_UpdateRequestCache
 - Application_EndRequest
- Per Request Transmission Events:

Request Interception Events

- Per Request Events (in order):
 - Application_BeginRequest
 - Application_AuthenticateRequest
 - Application_AuthorizeRequest
 - Application_ResolveRequestCache
 - Application_AcquireRequestState
 - Application_PreRequestHandlerExecute
 - Application_PostRequestHandlerExecute
 - Application_ReleaseRequestState
 - Application_UpdateRequestCache
 - Application_EndRequest
- Per Request Transmission Events:
 - Application_PreSendRequestHeaders
 - Application_PreSendRequestContent

Summary

- ASP+ provides a quantum leap in power
 - Tons of new features/infrastructure
 - Part of a broader frameworks platform
- ASP+ will make building web apps easier
 - Much less plumbing code required
 - Enable customers to focus on customers
- ASP+ will enable customers to develop a new breed of web applications
 - More opportunities to build richer apps

Additional Information

- "A Preview of ASP+" from Wrox Press
 - Available on Amazon and BarnesNoble
- Public Sample Application:
 - www.itsyspy.com
- ASP+ Community Sites:
 - www.aspng.com
 - www.aspfree.com
 - www.asptoday.com
 - www.4guysfromrolla.com
 - www.asp101.com
 - www.aspNextgen.com

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 - www.4guysfromrolla.com
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 - www.aspNextgen.com

